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ILLUSTRATED CATALOGUE

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JAMES B. CLOW & SON,

MANUFACTURERS AND DEALERS IN

# BRASS GOODS

FOR PLUMBERS, STEAM ENGINE BUILDERS,  
GAS AND STEAM FITTERS, ETC.

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WROUGHT IRON LAP-WELDED PIPE.

MALLEABLE AND CAST IRON FITTINGS.

---

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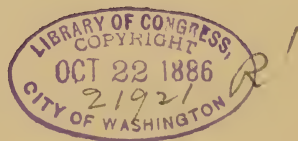
Registers and Ventilators, Pumps, Garden Vases  
AND SANITARY SPECIALTIES.

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CHAS. J. JOHNSON, PRINTER AND BINDER,  
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## TELEGRAPH CIPHER FOR ORDERING. PIPE.

| NUMBER OF FEET.    | SIZE.                | BLACK.      | GALVANIZED. |
|--------------------|----------------------|-------------|-------------|
| 100.....ASIA.      | $\frac{1}{8}$ .....  | ALLEGHENY.  |             |
| 200.....BELGIUM.   | $\frac{1}{4}$ .....  | BALTIMORE.  | AMAZON.     |
| 300.....CHILI.     | $\frac{3}{8}$ .....  | CAMDEN.     | BAY.        |
| 400.....DENMARK.   | $\frac{1}{2}$ .....  | DETROIT.    | COLORADO    |
| 500.....EGYPT.     | $\frac{3}{4}$ .....  | ERIE.       | DANUBE.     |
| 600.....FRANCE.    | 1.....               | FAIRMOUNT.  | ELBE.       |
| 700.....GERMANY.   | $1\frac{1}{4}$ ..... | GALENA.     | FIRTH.      |
| 800.....HOLLAND.   | $1\frac{1}{2}$ ..... | HARRISBURG. | GANGES.     |
| 900.....IRELAND.   | 2.....               | ITHACA.     | HUDSON.     |
| 1000.....JAPAN.    | $2\frac{1}{2}$ ..... | JAMESTOWN.  | INDUS.      |
| 1500.....JERSEY.   | 3.....               | KENSINGTON. | JUNIATA.    |
| 2000.....KENTUCKY. | $3\frac{1}{2}$ ..... | LANCASTER   | KANAWHA.    |
| 2500.....KANSAS.   | 4.....               | MACON.      | LAKE.       |
| 3000.....LIBERIA.  | $4\frac{1}{2}$ ..... | QUINCY.     | MIAMI.      |
| 3500.....LAPLAND.  | 5.....               | NEWARK.     | NILE.       |
| 4000.....MAINE.    | 6.....               | ONEIDA.     | OSAGE.      |
| 4500.....MEXICO.   | 7.....               | PARIS.      | PO.         |
| 5000.....NEVADA.   | 8.....               | READING.    | RHINE.      |
| 6000.....OHIO.     | 9.....               | SALEM.      | SEINE.      |
| 7000.....PERU.     | 10.....              | TROY.       | TWEED.      |
| 8000.....RUSSIA.   |                      |             |             |
| 9000.....SPAIN.    |                      |             |             |
| 10000.....TEXAS.   |                      |             |             |

### NUMBER OF BOILER TUBES REQUIRED.

|            |            |             |             |             |              |             |
|------------|------------|-------------|-------------|-------------|--------------|-------------|
| 1..MAB.    | 18..MARSH. | 35..MENSE.  | 52..MIND.   | 69..MOLE.   | 86..MOW.     | 250..NUT.   |
| 2..MAC.    | 19..MART.  | 36..MENT.   | 53..MINOR.  | 70..MONDE.  | 87..MUCH.    | 300..OBEY.  |
| 3..MAD.    | 20..MASK.  | 37..MERE.   | 54..MINT.   | 71..MONK.   | 88..MUD.     | 350..OLD.   |
| 4..MAG.    | 21..MAST.  | 38..MERL.   | 55..MIRE.   | 72..MONT.   | 89..MUFF.    | 400..PAD.   |
| 5..MAIL.   | 22..MAT.   | 39..MESH.   | 56..MIRK.   | 73..MOP.    | 90..MUFTI.   | 450..PIN.   |
| 6..MAID.   | 23..MATCH. | 40..MET.    | 57..MIRTH.  | 74..MORAL.  | 91..MULCT.   | 500..QUAD.  |
| 7..MAIN.   | 24..MATH.  | 41..MEW.    | 58..MISS.   | 75..MORE.   | 92..MULL.    | 550..QUOTE. |
| 8..MAKE.   | 25..MATE.  | 42..MICE.   | 59..MITE.   | 76..MORN.   | 93..MUMP.    | 600..RAPID. |
| 9..MAN.    | 26..MAUL.  | 43..MID.    | 60..MIX.    | 77..MORRIS. | 94..MURAL.   | 650..ROW.   |
| 10..MANKS. | 27..MAY.   | 44..MIDGE.  | 61..MIZZEN. | 78..MORSE.  | 95..MUSE.    | 700..SAD.   |
| 11..MANOR. | 28..MAZE.  | 45..MIDST.  | 62..MOAT.   | 79..MOST.   | 96..MUSH.    | 750..SCOT.  |
| 12..MANY.  | 29..MEAD.  | 46..MIGHT.  | 63..MOB.    | 80..MOT.    | 97..MUSK.    | 800..TAP.   |
| 13..MAR.   | 30..MEAL.  | 47..MILD.   | 64..MOCK.   | 81..MOTH.   | 98..MUTE.    | 850..TRY.   |
| 14..MARCH. | 31..MEAN.  | 48..MILE.   | 65..MODE.   | 82..MOULD.  | 99..MYSTIC.  | 900..UGLY.  |
| 15..MARS.  | 32..MEAT.  | 49..MILK.   | 66..MOIL.   | 83..MOUNT.  | 100..MYRTLE. | 950..URN.   |
| 16..MARKS. | 33..MELT.  | 50..MINCE.  | 67..MOIST.  | 84..MOUTH.  | 150..NAB.    | 1000..VAST. |
| 17..MARL.  | 34..MEND.  | 51..MINGLE. | 68..MOLD.   | 85..MOVE.   | 200..NICE.   |             |

### DIAMETER OF BOILER TUBES REQUIRED.

| O. D.<br>Inch.              | O. D.<br>Inch.            | O. D.<br>Inch.                  | O. D.<br>Inch. | O. D.<br>Inch.  |
|-----------------------------|---------------------------|---------------------------------|----------------|-----------------|
| 1....ALBATROSS.             | $2\frac{1}{4}$ ....FINCH. | $3\frac{1}{2}$ ....KITE.        | 6....PLOVER.   | 11....STARLING. |
| $1\frac{1}{4}$ ....BITTERN. | $2\frac{1}{2}$ ....GOOSE. | $3\frac{3}{4}$ ....LARK.        | 7....PARROT.   | 12....TEAL.     |
| $1\frac{1}{2}$ ....CONDOR.  | $2\frac{3}{4}$ ....HAWK.  | 4....MACAW.                     | 8....QUAIL.    | 13....VULTURE.  |
| $1\frac{3}{4}$ ....DUCK.    | 3....IBIS.                | $4\frac{1}{2}$ ....NIGHTINGALE. | 9....ROBIN.    | 14....WIDGEON.  |
| 2....EAGLE.                 | $3\frac{1}{4}$ ....JAY.   | 5....OWL.                       | 10....RAVEN.   | 15....WREN.     |

### LENGTH IN FEET OF BOILER TUBES REQUIRED.

| Feet.         | Feet.           | Feet.            | Feet.           | Feet.           |
|---------------|-----------------|------------------|-----------------|-----------------|
| 1.....APE.    | 6.....FOX.      | 11.....KANGAROO. | 16.....PANTHER. | 21.....UNICORN. |
| 2.....BADGER. | 7.....GOAT.     | 12.....LION.     | 17.....QUAGGA.  | 22.....VAMPIRE. |
| 3.....CAT.    | 8.....HORSE.    | 13.....MULE.     | 18.....RAM.     | 23.....WOLF.    |
| 4.....DOG.    | 9.....IBEX.     | 14.....NYLGAW.   | 19.....SHEEP.   | 24.....ZEBRA.   |
| 5.....ELK.    | 10.....JACKALL. | 15.....OTTER.    | 20.....TIGER.   |                 |

LENGTH IN INCHES OF BOILER TUBES REQUIRED.

|                |                 |                |                  |
|----------------|-----------------|----------------|------------------|
| Inch.          | Inch.           | Inch.          | Inch.            |
| 1.....ALEWIFE. | 4.....DOLPHIN.  | 7.....GRAMPUS. | 10.....MULLET.   |
| 2.....BASS.    | 5.....EEL.      | 8.....HAKE.    | 11.....NAUTILJS. |
| 3.....COD.     | 6.....FLOUNDER. | 9.....LOBSTER. | 12.....OYSTER,   |

LENGTH IN FRACTIONS OF AN INCH REQUIRED.

|             |              |             |              |              |               |               |
|-------------|--------------|-------------|--------------|--------------|---------------|---------------|
| 1/8....DEW. | 1/4....HAIL. | 3/8....ICE. | 1/2....RAIN. | 5/8....SNOW. | 3/4....SLEET. | 7/8....WATER. |
|-------------|--------------|-------------|--------------|--------------|---------------|---------------|

WIRE GUAGE.

To be used only when the required thickness differs from standard.

|                |                 |                 |                |
|----------------|-----------------|-----------------|----------------|
| No.            | No.             | No.             | No.            |
| 1.....APOLLO.  | 6.....FLORA.    | 11.....LUNA.    | 15.....PAN.    |
| 2.....BACCHUS. | 7.....GRACES.   | 12.....MERCURY. | 16.....SATURN. |
| 3.....CUPID.   | 8.....HEBE.     | 13.....NEPTUNE. | 17.....URANUS. |
| 4.....DIANA.   | 9.....IRIS.     | 14.....ORPHEUS. |                |
| 5.....EREBUS.  | 10.....JUPITER. |                 |                |

QUERIES.

|                                              |                                                 |
|----------------------------------------------|-------------------------------------------------|
| ACORN...At what price can you furnish....?   | DRILL...What is the lowest contract rate of     |
| ALLOY...At what price can you buy.....?      | freight you can obtain on.....?                 |
| BRANCH...At what price, and how soon can you | EXPRESS.What is the freight per 100 lbs. by ex- |
| furnish.....?                                | press, on.....?                                 |
| COIN....Have you in stock and can you fur-   | FARM...Have you shipped order.....inst.?        |
| nish.....?                                   | FIST...Have you shipped us any.....?            |
|                                              | GATE....When can you ship.....?                 |

PHRASES.

|                                                  |                                                   |
|--------------------------------------------------|---------------------------------------------------|
| ABOVE...Ship immediately by express.....         | EBONY...Particulars go by mail.                   |
| ACTIVE...Ship immediately by steamer.....        | FLAX....Will wait here for reply by mail.         |
| ADRIFT..Ship immediately by rail.....            | GABLE...We can not make.....                      |
| AFOOT...Suspend shipment of order of.....inst.   | GEM.....We will commence making... ..             |
| AGATE...Send tracer immediately for shipment     | GILT....Suspend work on order of.....inst.        |
| of.....                                          | until further instructions.                       |
| AIR.....Your telegram came too late to stop      | GOLD....You can vary the length but send not      |
| shipment. ....                                   | less than.....                                    |
| ALOFT...We have shipped per.....                 | GRAIN...You can vary the thickness, but not       |
| ANVIL...We shipped your order on.....            | more than.....                                    |
| APPLE...We will ship you immediately order....   | GRAPE...We have suspended work on your            |
| ARCHER..We have suspended shipment of your       | order.                                            |
| order of.....                                    | GUARD...We can (or will) vary the lengths, and    |
| ATLAS...We will ship your order on.....          | will send.....                                    |
| BAIT....Please reply immediately by telegraph..  | GULF....We can (or will) vary the thickness, and  |
| BEACH...We offer you for reply by telegraph....  | will send.....                                    |
| BITE....We offer you for reply by mail.          | HARP....None of the goods you order are in        |
| BOAT....Telegraph us best offer for.....         | stock.                                            |
| BRIG....If price too high, make counter offer by | HEMP...We have in stock and can furnish you       |
| telegraph.                                       | at.....                                           |
| CABLE...Delivery in our city.                    | HORN...We have none in stock, but will make       |
| CEMENT..Delivery in New York.                    | and ship by.....                                  |
| CHAIN...Delivery at Tide-water.                  | IDOL....Freight by express per 100 lbs. is.....   |
| COAL....Delivery in Philadelphia.                | IRON....Freight by rail in car loads per 100 lbs. |
| CROWN...Free-on-board at works.                  | is.....                                           |
| DARK...We can furnish you at.....                | IVY....Freight by rail in less than car loads     |
| DEXTER...The lowest price we can offer.....      | is.....                                           |
| DISK....We cannot accept your offer....          | PREFER..Give preference over all others to order  |
| DRUG...We have entered your order for.....       | Number.....                                       |





## EXTRA AND DOUBLE EXTRA STRONG

## WROUGHT IRON PIPE.

| Nominal Size.   | Actual Outside Diameter. Both X and XX Strong. | Actual Inside Diameter. X Strong. | Actual Inside Diameter. XX Strong. | Weight Per Foot. X Strong. Pounds. | Weight Per Foot. XX Strong. Pounds. | Price Per Foot. X Strong. | Price Per Foot. XX Strong. |
|-----------------|------------------------------------------------|-----------------------------------|------------------------------------|------------------------------------|-------------------------------------|---------------------------|----------------------------|
| $\frac{1}{8}$   | .40                                            | .20                               | .....                              | .40                                | .....                               | .06 $\frac{1}{2}$         | .....                      |
| $\frac{1}{4}$   | .54                                            | .29                               | .....                              | .56                                | .....                               | .06 $\frac{1}{2}$         | .....                      |
| $\frac{3}{8}$   | .67                                            | .42                               | .....                              | .75                                | .....                               | .07 $\frac{1}{2}$         | .....                      |
| $\frac{1}{2}$   | .84                                            | .54                               | .24                                | 1.16                               | 1.38                                | .09 $\frac{1}{2}$         | .19                        |
| $\frac{3}{4}$   | 1.05                                           | .73                               | .42                                | 1.61                               | 2.32                                | .12                       | .24                        |
| 1               | 1.31                                           | .95                               | .59                                | 2.32                               | 3.25                                | .16                       | .32                        |
| 1 $\frac{1}{4}$ | 1.66                                           | 1.27                              | .88                                | 3.19                               | 4.57                                | .22                       | .44                        |
| 1 $\frac{1}{2}$ | 1.90                                           | 1.49                              | 1.09                               | 3.28                               | 6.25                                | .42                       | .84                        |
| 2               | 2.37                                           | 1.93                              | 1.49                               | 5.22                               | 7.94                                | .52                       | 1.04                       |
| 2 $\frac{1}{2}$ | 2.87                                           | 2.31                              | 1.75                               | 7.28                               | 14.32                               | .84                       | 1.68                       |
| 3               | 3.50                                           | 2.89                              | 2.28                               | 9.44                               | 18.38                               | 1.10                      | 2.20                       |
| 3 $\frac{1}{2}$ | 4.00                                           | 3.36                              | 2.72                               | 12.92                              | 22.63                               | 1.34                      | 2.68                       |
| 4               | 4.50                                           | 3.82                              | 3.14                               | 13.44                              | 24.88                               | 1.66                      | 3.32                       |
| 4 $\frac{1}{2}$ | 5.00                                           |                                   |                                    |                                    |                                     |                           |                            |
| 5               | 5.56                                           |                                   |                                    |                                    |                                     |                           |                            |
| 6               | 6.62                                           |                                   |                                    |                                    |                                     |                           |                            |

Pipe away from the above standard will be charged at the price of Hydraulic Tubes.

The outside diameter of Extra and Double Extra Strong is always the same as ordinary pipe.

## WROUGHT IRON STAY-BOLT TUBES.

| Inside Diameter. Inches. | Outside Diameter. Inches. | Weight Per Foot. Pounds. | Price Per Pound. Cents. | Inside Diameter. Inches. | Outside Diameter. Inches. | Weight Per Foot. Pounds. | Price Per Pound. Cents. |
|--------------------------|---------------------------|--------------------------|-------------------------|--------------------------|---------------------------|--------------------------|-------------------------|
| $\frac{5}{16}$           | $\frac{11}{16}$           | 1.70                     | 16                      | $\frac{7}{16}$           | $1\frac{3}{16}$           | 3.10                     | 16                      |
| $\frac{5}{16}$           | $\frac{15}{16}$           | 2.21                     | 16                      | $\frac{8}{16}$           | $1\frac{4}{16}$           | 3.39                     | 16                      |
| $\frac{6}{16}$           | 1                         | 2.40                     | 16                      | $\frac{10}{16}$          | $1\frac{6}{16}$           | 3.99                     | 18                      |
| $\frac{6}{16}$           | $1\frac{1}{16}$           | 2.61                     | 16                      | $\frac{12}{16}$          | $1\frac{8}{16}$           | 4.13                     | 18                      |
| $\frac{7}{16}$           | $1\frac{2}{16}$           | 3.00                     | 16                      |                          |                           |                          |                         |

## TUYERE PIPE.

1 inch Special Tuyere Pipe, 25 to 30 foot lengths.....per ft., 32c.

This Pipe is tested thoroughly. Every care is taken to have each piece perfect.



Screw and Socket.

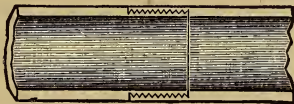


Inserted Joint.

LIGHT WROUGHT IRON  
ARTESIAN WELL TUBE, OR OIL WELL CASING.

With Screw and Socket, or with Inserted Joint.  
Finished Smooth Inside.

| Diameter<br>Actual<br>Outside. | Diameter<br>Nominal<br>Inside. | Pounds.<br>Weight per<br>Foot. | Price<br>per Foot. | Diameter<br>Actual<br>Outside. | Diameter<br>Nominal<br>Inside. | Pounds<br>Weight per<br>Foot. | Price<br>per Foot. |
|--------------------------------|--------------------------------|--------------------------------|--------------------|--------------------------------|--------------------------------|-------------------------------|--------------------|
| 1¾ in.                         | 1½ in.                         | 1.665                          | \$0.20             | 4½ in.                         | 4¼ in.                         | 6.010                         | \$0.60             |
| 2¼ " "                         | 2 " "                          | 2.238                          | .25                | 4¾ " "                         | 4½ " "                         | 6.650                         | .66                |
| 2½ " "                         | 2¼ " "                         | 2.755                          | .28                | 5 " "                          | 4¾ " "                         | 7.226                         | .72                |
| 2¾ " "                         | 2½ " "                         | 3.045                          | .31                | 5¼ " "                         | 5 " "                          | 7.667                         | .79                |
| 3 " "                          | 2¾ " "                         | 3.333                          | .34                | 5½ " "                         | 5 ⅜ " "                        | 8.083                         | .86                |
| 3¼ " "                         | 3 " "                          | 3.958                          | .38                | 6 " "                          | 5½ " "                         | 9.346                         | 1.00               |
| 3½ " "                         | 3¼ " "                         | 4.272                          | .43                | 6½ " "                         | 6¼ " "                         | 10.064                        | 1.80               |
| 3¾ " "                         | 3½ " "                         | 4.590                          | .45                | 7 " "                          | 6½ " "                         | 12.435                        | 1.45               |
| 4 " "                          | 3¾ " "                         | 5.320                          | .52                | 8 " "                          | 7½ " "                         | 15.109                        | 1.85               |
| 4¼ " "                         | 4 " "                          | 5.500                          | .56                | 8½ " "                         | 8¼ " "                         | 16.155                        | 2.10               |



Flush Joint.

Heavy Tubes can be made with Flush Joint, as above, but it *is not* adapted to *light Casing*.

HEAVY WROUGHT IRON  
ARTESIAN OR OIL WELL TUBE.

With Screw and Socket, or with Flush Joints,  
Finished Smooth Inside.

| Diam. Actual Outside. | 1 <sup>66</sup> / <sub>100</sub> | 1 <sup>9</sup> / <sub>10</sub> | 2 <sup>3</sup> / <sub>8</sub> | 2 <sup>7</sup> / <sub>8</sub> | 3½  | 4   | 4½  | 5   | 5 <sup>56</sup> / <sub>100</sub> | 6 <sup>3</sup> / <sub>8</sub> | 7 <sup>5</sup> / <sub>8</sub> | 8 <sup>5</sup> / <sub>8</sub> | 9 <sup>88</sup> / <sub>100</sub> | 10¾  |
|-----------------------|----------------------------------|--------------------------------|-------------------------------|-------------------------------|-----|-----|-----|-----|----------------------------------|-------------------------------|-------------------------------|-------------------------------|----------------------------------|------|
| Diam. Nom'l Inside.   | 1¼                               | 1½                             | 2                             | 2½                            | 3   | 3½  | 4   | 4½  | 5                                | 6                             | 7                             | 8                             | 9                                | 10   |
| Price per foot.....   | \$0.10                           | .12                            | .15                           | .22                           | .30 | .40 | .50 | .60 | .66                              | .90                           | 1.20                          | 1.65                          | 2.20                             | 3.00 |

TO TAKE THE PLACE OF ALL PREVIOUS LISTS.

Manufacturers' Revised Price List.

Subject to change without notice.

Revised and adopted June 11, 1884.

LAP-WELDED CHARCOAL IRON BOILER TUBES.

| Outside Diameter. | Price Per Foot. | Thickness. | Thickness Nearest B'gm W. G. | Nominal Weight per foot. | Outside Diameter. | Price Per Foot. | Thickness. | Thickness Nearest B'gm W. G. | Nominal Weight per foot. |
|-------------------|-----------------|------------|------------------------------|--------------------------|-------------------|-----------------|------------|------------------------------|--------------------------|
| Inches.           | \$ c.           | Inches.    |                              | Pounds.                  | Inches.           | \$ c.           | Inches.    |                              | Pounds.                  |
| 1                 | .23             | .072       | 15                           | .70                      | 4½                | .60             | .134       | 10                           | 6.17                     |
| 1¼                | .23             | .072       | 15                           | .90                      | 5                 | .72             | .148       | 9                            | 7.58                     |
| 1½                | .23             | .083       | 14                           | 1.24                     | 6                 | 1.00            | .165       | 8                            | 10.16                    |
| 1¾                | .22             | .095       | 13                           | 1.66                     | 7                 | 1.45            | .165       | 8                            | 11.90                    |
| 2                 | .22             | .095       | 13                           | 1.91                     | 8                 | 1.85            | .165       | 8                            | 13.65                    |
| 2¼                | .25             | .095       | 13                           | 2.16                     | 9                 | 2.25            | .180       | 7                            | 16.76                    |
| 2½                | .28             | .109       | 12                           | 2.75                     | 10                | 2.75            | .203       | 6                            | 21.00                    |
| 2¾                | .31             | .109       | 12                           | 3.04                     | 11                | 3.25            | .220       | 5                            | 25.00                    |
| 3                 | .34             | .109       | 12                           | 3.33                     | 12                | 3.55            | .229       | 4½                           | 28.50                    |
| 3¼                | .38             | .120       | 11                           | 3.96                     | 13                | 4.20            | .238       | 4                            | 32.06                    |
| 3½                | .43             | .120       | 11                           | 4.28                     | 14                | 4.75            | .248       | 3½                           | 36.00                    |
| 3¾                | .45             | .120       | 11                           | 4.60                     | 15                | 5.75            | .259       | 3                            | 40.60                    |
| 4                 | .52             | .134       | 10                           | 5.47                     | 16                | 6.75            | .270       | 2½                           | 45.20                    |

The above prices are for tubes up to 20 feet long. For tubes in excess of that length, ten per cent. will be added to net of invoice. Extra thickness of tubes will be charged as per list of extra gauges.

NET PRICES OF EXTRA GAUGES OF BOILER TUBES.

Revised and adopted December 17, 1883.

To take the place of all previous lists and subject to change without notice.

For EXTRA wire gauge "Boiler Tubes" away from standard, not exceeding four wire gauges, add one cent for each inch in diameter to the net price per foot for each additional number. To calculate price take discounts from list prices of regular tubes, and add net charge for extra wire gauge, thus :

| For 1 Number.      | For 2 Numbers.     | For 3 Numbers.     | For 4 Numbers.     |
|--------------------|--------------------|--------------------|--------------------|
| 2 inch,.....2 cts. | 2 inch,.....4 cts. | 2 inch,.....6 cts. | 2 inch,.....8 cts. |
| 2¼ " .....2¼ "     | 2¼ " .....4½ "     | 2¼ " .....6¾ "     | 2¼ " .....9 "      |
| 2½ " .....2½ "     | 2½ " .....5 "      | 2½ " .....7½ "     | 2½ " .....10 "     |

Beyond four numbers price is per pound. Swaging or swelling 2-in. or 2¼-in. Tubes, 5 cts. per end extra.

SAFE ENDS.

Net prices for Safe Ends to 6 inches long, inclusive. Over 6 inches long, the extra length will be charged for in same proportion.

| Size .....     | 1   | 1¼  | 1½  | 1¾  | 2   | 2¼  | 2½  | 2¾  | 3   | 3¼  | 3½  | 3¾  | 4   | 4½  | 5   | 6   |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Each End ..... | .13 | .13 | .13 | .13 | .13 | .14 | .16 | .18 | .20 | .22 | .25 | .27 | .29 | .32 | .37 | .45 |

NET PRICES FOR REPAIRING AND SAFE ENDING OLD BOILER TUBES.

| Size .....                     | 1   | 1¼  | 1½  | 1¾  | 2   | 2¼  | 2½  | 2¾  | 3    | 3¼   | 3½   | 3¾   | 4    | 4½   | 5    | 6    |
|--------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|
| Each Boiler Tube (both ends) . | .60 | .60 | .60 | .60 | .60 | .68 | .80 | .94 | 1.00 | 1.17 | 1.40 | 1.61 | 1.78 | 2.08 | 2.70 | 3.12 |

NET PRICES FOR SAFE ENDS PUT ON NEW BOILER TUBES.

| Size .....     | 1   | 1¼  | 1½  | 1¾  | 2   | 2¼  | 2½  | 2¾  | 3   | 3¼  | 3½  | 3¾  | 4   | 4½  | 5   | 6   |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Each End ..... | .20 | .20 | .20 | .20 | .20 | .22 | .23 | .27 | .31 | .34 | .38 | .41 | .44 | .49 | .56 | .69 |

These prices for Safe Ends govern up to No. 10 Eng. W. G. Beyond that an extra charge will be made at rate of one cent per each inch in diameter for each Extra Gauge per safe end.





## CAST IRON PIPE FOR WATER AND GAS.

| Diameter in Inches. | Thickness in Inches. Water. | Thickness in Inches. Gas. | Weight per Foot in Pounds. Water. | Weight per Foot in Pounds. Gas. | Lead per Joint. About | Yarn per Joint. About |
|---------------------|-----------------------------|---------------------------|-----------------------------------|---------------------------------|-----------------------|-----------------------|
| 3                   | $\frac{1}{2}$               | $\frac{3}{8}$             | 17                                | $12\frac{1}{2}$                 | $3\frac{1}{2}$ lbs.   | 6 oz                  |
| 4                   | $\frac{1}{2}$               | $\frac{3}{8}$             | 22                                | 18                              | $4\frac{1}{2}$ "      | 7 "                   |
| 6                   | $\frac{1}{2}$               | $\frac{3}{8}$             | 33                                | 28                              | 8 "                   | 9 "                   |
| 8                   | $\frac{1}{2}$               | $\frac{3}{8}$             | 43                                | 40                              | 11 "                  | 11 "                  |
| 10                  | $\frac{5}{8}$               | $\frac{1}{2}$             | 66                                | 55                              | 15 "                  | 13 "                  |
| 12                  | $\frac{3}{4}$               | $\frac{5}{8}$             | 93                                | 77                              | 20 "                  | 18 "                  |
| 16                  | $\frac{3}{4}$               | $\frac{5}{8}$             | 125                               | 108                             |                       |                       |
| 20                  | $\frac{7}{8}$               | $\frac{3}{4}$             | 197                               | 160                             |                       |                       |
| 24                  | 1                           | $\frac{3}{4}$             | 250                               | 190                             |                       |                       |
| 30                  | $1\frac{1}{8}$              | $\frac{7}{8}$             | 358                               | 276                             |                       |                       |
| 36                  | $1\frac{1}{4}$              | 1                         | 480                               | 380                             |                       |                       |

Unless otherwise ordered, all Water Pipe is furnished Coated inside and out, and Gas Pipe not Coated.

## LIST AND WEIGHTS OF REGULAR FITTINGS.

## CROSSES.

| Size.       | Weight lbs. | Size.       | Weight lbs. |
|-------------|-------------|-------------|-------------|
| 4x 4x 4x 4  | 140         | 12x12x 6x 6 | 525         |
| 6x 6x 6x 6  | 232         | 16x16x16x16 | 1166        |
| 6x 6x 4x 4  | 210         | 16x16x10x10 | 940         |
| 8x 8x 8x 8  | 364         | 16x16x 8x 8 | 842         |
| 8x 8x 6x 6  | 320         | 20x20x16x16 | 1400        |
| 8x 8x 4x 4  | 290         | 20x20x12x12 | 1372        |
| 10x10x10x10 | 550         | 20x20x10x10 | 1287        |
| 10x10x 8x 8 | 467         | 20x20x 8x 8 | 1180        |
| 10x10x 6x 6 | 425         | 20x20x 6x 6 | 1100        |
| 12x12x10x10 | 606         | 24x24x20x20 | 2200        |
| 12x12x 8x 8 | 568         | 24x24x 8x 8 | 1732        |

## REDUCERS.

| Size. | Weight lbs. | Size. | Weight lbs. |
|-------|-------------|-------|-------------|
| 4x3   | 80          | 10x 6 | 172         |
| 6x4   | 118         | 10x 4 | 130         |
| 6x3   | 116         | 12x10 | 233         |
| 8x6   | 137         | 12x 8 | 212         |
| 8x4   | 123         | 12x 6 | 272         |
| 8x3   | 121         | 16x12 | 300         |
| 10x8  | 201         | 24x20 | 914         |

## PLUGS.

| Size.  | Weight lbs. | Size.  | Weight lbs. |
|--------|-------------|--------|-------------|
| 3 inch | 9           | 8 inch | 27          |
| 4 "    | 11          | 10 "   | 55          |
| 6 "    | 20          | 12 "   | 80          |

## CAPS.

| Size.  | Weight lbs. | Size.  | Weight lbs. |
|--------|-------------|--------|-------------|
| 3 inch | 20          | 8 inch | 60          |
| 4 "    | 30          | 10 "   | 80          |
| 6 "    | 40          | 12 "   | 100         |

## TEES.

| Size.    | Weight lbs. | Size.    | Weight lbs. |
|----------|-------------|----------|-------------|
| 4x 4x 4  | 98          | 12x12x 6 | 437         |
| 6x 6x 6  | 210         | 16x16x16 | 970         |
| 6x 6x 4  | 167         | 16x16x12 | 868         |
| 8x 8x 8  | 276         | 16x16x 6 | 740         |
| 8x 8x 6  | 267         | 20x20x20 | 1475        |
| 8x 8x 4  | 250         | 20x20x 8 | 1190        |
| 10x10x10 | 360         | 20x20x 6 | 1061        |
| 10x10x 8 | 338         | 24x24x20 | 1866        |
| 10x10x 6 | 370         | 24x24x16 | 1755        |
| 10x10x 4 | 344         | 24x24x10 | 1230        |
| 12x12x12 | 487         | 24x24x 8 | 1650        |

## SLEEVES.

| Size.  | Weight lbs. | Size.   | Weight lbs. |
|--------|-------------|---------|-------------|
| 3 inch | 24          | 16 inch | 274         |
| 4 "    | 40          | 20 "    | 328         |
| 6 "    | 68          | 24 "    | 410         |
| 8 "    | 98          | 30 "    | 700         |
| 10 "   | 140         | 36 "    | 835         |
| 12 "   | 160         |         |             |

## ELBOWS.

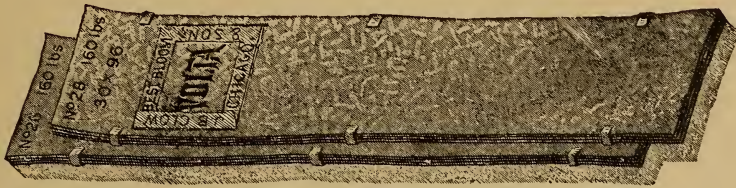
| Size.  | Weight lbs. | Size.   | Weight lbs. |
|--------|-------------|---------|-------------|
| 3 inch | 45          | 12 inch | 484         |
| 4 "    | 59          | 16 "    | 690         |
| 6 "    | 178         | 20 "    | 1218        |
| 8 "    | 221         | 24 "    | —           |
| 10 "   | 292         | 30 "    | 2500        |

$\frac{1}{8}$  and  $\frac{1}{16}$  Bends about same weight as Elbows.

Estimate furnished on Cast Iron Flange Pipe for Water or Gas.



## GALVANIZED SHEET IRON.



## Volta Best Bloom (Juniata) and Refined Galvanized Sheet Iron.

|                                     |                                     |                    |
|-------------------------------------|-------------------------------------|--------------------|
| Nos. 14 to 20 inclusive.....12 cts. | Nos. 25 to 26 inclusive.....14 cts. | No. 28.....16 cts. |
| " 21 to 24 " .....13 cts.           | No. 27.....15 cts.                  | " 29.....17 cts.   |

## WEIGHT PER SQUARE FOOT FROM WIRE GAUGE.

|                   |                   |                   |                   |
|-------------------|-------------------|-------------------|-------------------|
| No. 29.....12 oz. | No. 25.....16 oz. | No. 21.....24 oz. | No. 17.....43 oz. |
| " 28.....13 oz.   | " 24.....17 oz.   | " 20.....28 oz.   | " 16.....48 oz.   |
| " 27.....14 oz.   | " 23.....19 oz.   | " 19.....33 oz.   | " 15.....53 oz.   |
| " 26.....15 oz.   | " 22.....21 oz.   | " 18.....38 oz.   |                   |

Sizes kept in Stock, 24 26 28 30 inches in width, by 72, 84, 96 inches in length.

EXTRA LENGTHS.—One-half cent per pound additional for Pattern Sheets, *i. e.*, all iron required to be of exact lengths specified, or of the same length. Sheets over 120 inches long, 1 cent per pound extra; but iron of any length, between 72 and 96 inch inclusive, in bundles, in which one to two sheets of the same number and with, but shorter than full length ordered, are allowed to be put up in each bundle, will be considered ordinary length or merchant iron, and will not be subject to extra charge.

## BOILER PLATE AND TANK IRON.

Ordinary lengths,  $\frac{3}{16}$  to 1 in. thick, to 60 in. wide, at regular prices. Over 60 in. wide, extra.

|                                                                                     |                                      |
|-------------------------------------------------------------------------------------|--------------------------------------|
| Tank and Safe Iron, to No. 14 gauge inclusive.....                                  | Subject to<br>Special<br>Quotations. |
| Charcoal Rolled, C. No. 1.....                                                      |                                      |
| C. H. No. 1, Shell Iron.....                                                        |                                      |
| Standard C. H. No. 1 Flange, tensile strength, 50,000 lbs.....                      |                                      |
| Charcoal Hammered Flange, C. H. No. 1 best Flange, tensile strength 55,000 lbs..... |                                      |
| Extra Flange, finest Flange Iron made.....                                          |                                      |
| Fire Box.....                                                                       |                                      |

## BOILER HEADS.

| Rolled to 66 in. diameter inclusive..... | Extra.         | Rolled to 77 to 80 in. diameter inclusive ... | Extra.         |
|------------------------------------------|----------------|-----------------------------------------------|----------------|
| 67 to 70 " ".....                        | $\frac{1}{2}$  | 81 to 85 " ".....                             | $2\frac{1}{2}$ |
| 71 to 75 " ".....                        | $1\frac{1}{2}$ | 86 to 88 " ".....                             | $3\frac{1}{2}$ |
| 76 to 80 " ".....                        | 2              |                                               | $4\frac{1}{2}$ |

## RECTANGULAR PLATE.—Extra Sizes.

Ordinary lengths,  $\frac{3}{16}$  to 1 inch thick, inclusive.

|                                                                     |                                 |
|---------------------------------------------------------------------|---------------------------------|
| 61 to 66 in. wide by $\frac{3}{16}$ to 1 in. thick, inclusive. .... | $\frac{1}{2}$ c. per lb. extra. |
| 67 to 70 " " " ".....                                               | $\frac{3}{4}$ c. " "            |
| 71 to 75 " " " ".....                                               | $1\frac{1}{4}$ c. " "           |
| 76 to 80 " " " ".....                                               | $1\frac{1}{2}$ c. " "           |
| 81 to 84 " " " ".....                                               | 2c. " "                         |
| 85 to 88 " " " ".....                                               | $2\frac{1}{2}$ c. " "           |

Tapered Plates, special prices.

## SHEET IRON.

|                    |                          |                                      |
|--------------------|--------------------------|--------------------------------------|
| Nos. 10 to 14..... | No. 27.....              | Subject to<br>Special<br>Quotations. |
| " 15 to 17.....    | " 28.....                |                                      |
| " 18 to 20.....    | " 30.....                |                                      |
| " 22 to 24.....    | Charcoal Sheet.....      |                                      |
| " 25 to 26.....    | Extra Refined Sheet..... |                                      |



REVISED LIST  
OF  
**Malleable and Cast Iron Fittings**  
FOR  
**Gas, Steam and Water Pipe.**

Our new patterns for Cast Iron Fittings, for beauty, finish and strength, are unequaled by any others in the market.

In ordering, please state whether "Cast Iron" or "Malleable."

NOTE.—All classes and sizes are made in Malleable, from  $\frac{1}{4}$  inch to 2 inch, inclusive, also Ells, Tees, Crosses and Reducers,  $2\frac{1}{2}$  inch to 4 inch as numbered, viz.: 38, 42, 46, 50, 254, 255, 256, 265, 266, 267, 268, 269, 282, 295, 391, 394, 397, 494, 495, 496, 497, 539, 542, 543, 547, 548 and 550. All other sizes above 2 inch are made of CAST IRON ONLY.

Also such sizes as are indicated by the letter "C" are made of Cast Iron.

We keep all sizes of "Gas or Plain Fittings" up to 2 inch, except those marked "\*", which indicates "Beaded."

We keep in stock "Malleable" Galvanized Fittings, such numbers as marked "G," also furnish TO ORDER Galvanized Cast Iron Fittings.

FITTINGS MADE TO ORDER AT AN EXTRA CHARGE.



**ELBOWS.**



| No.         |                               | No.         |                                 | No.                    |                                 |
|-------------|-------------------------------|-------------|---------------------------------|------------------------|---------------------------------|
| 1.....      | $\frac{1}{8}$ x $\frac{1}{8}$ | G C 18..... | 1 x 1                           | 41.....                | 3 x $2\frac{1}{2}$              |
| 2.....      | $\frac{1}{4}$ x $\frac{1}{8}$ | * 21.....   | $1\frac{1}{4}$ x $\frac{3}{4}$  | G 42.....              | 3 x 3                           |
| 3.....      | $\frac{1}{4}$ x $\frac{1}{4}$ | G C 22..... | $1\frac{1}{4}$ x 1              | G 46.....              | $3\frac{1}{2}$ x $3\frac{1}{2}$ |
| 5.....      | $\frac{3}{8}$ x $\frac{1}{4}$ | G C 23..... | $1\frac{1}{4}$ x $1\frac{1}{4}$ | G 50.....              | 4 x 4                           |
| C 6.....    | $\frac{3}{8}$ x $\frac{3}{8}$ | * 26.....   | $1\frac{1}{2}$ x 1              | 52.....                | $4\frac{1}{2}$ x $4\frac{1}{2}$ |
| 8.....      | $\frac{1}{2}$ x $\frac{3}{8}$ | G C 27..... | $1\frac{1}{2}$ x $1\frac{1}{4}$ | 54.....                | 5 x 5                           |
| G C 9.....  | $\frac{1}{2}$ x $\frac{1}{2}$ | G C 28..... | $1\frac{1}{2}$ x $1\frac{1}{2}$ | 56.....                | 6 x 6                           |
| * 11.....   | $\frac{3}{4}$ x $\frac{3}{8}$ | G C 32..... | 2 x $1\frac{1}{2}$              | 56 $\frac{1}{2}$ ..... | 7 x 7                           |
| G C 12..... | $\frac{3}{4}$ x $\frac{1}{2}$ | G C 33..... | 2 x 2                           | 57.....                | 8 x 8                           |
| G C 13..... | $\frac{3}{4}$ x $\frac{3}{4}$ | 37.....     | $2\frac{1}{2}$ x 2              | 58.....                | 9 x 9                           |
| C * 16..... | 1 x $\frac{3}{4}$             | G 38.....   | $2\frac{1}{2}$ x $2\frac{1}{2}$ | 59.....                | 10 x 10                         |
| G C 17..... | 1 x $\frac{3}{4}$             |             |                                 |                        |                                 |



**STREET ELBOWS.**

| No.       |                               | No.       |                                 | No.       |                                 |
|-----------|-------------------------------|-----------|---------------------------------|-----------|---------------------------------|
| G 60..... | $\frac{1}{2}$ x $\frac{1}{2}$ | G 65..... | 1 x 1                           | G 71..... | $1\frac{1}{2}$ x $1\frac{1}{4}$ |
| G 62..... | $\frac{3}{4}$ x $\frac{3}{4}$ | G 67..... | $1\frac{1}{4}$ x 1              | G 72..... | $1\frac{1}{2}$ x $1\frac{1}{2}$ |
| G 64..... | 1 x $\frac{3}{4}$             | G 68..... | $1\frac{1}{4}$ x $1\frac{1}{4}$ | G 75..... | 2 x 2                           |



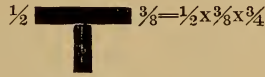
**ELBOWS.**  
WITH SIDE OUTLET.

| No.     |                                               | No.     |                                               | No.     |                       |
|---------|-----------------------------------------------|---------|-----------------------------------------------|---------|-----------------------|
| 77..... | $\frac{3}{8}$ x $\frac{3}{8}$ x $\frac{1}{4}$ | 84..... | $\frac{3}{4}$ x $\frac{3}{4}$ x $\frac{1}{2}$ | 88..... | 1 x 1 x $\frac{1}{2}$ |
| 80..... | $\frac{1}{2}$ x $\frac{1}{2}$ x $\frac{3}{8}$ | 85..... | $\frac{3}{4}$ x $\frac{3}{4}$ x $\frac{3}{4}$ | 89..... | 1 x 1 x $\frac{3}{4}$ |
| 83..... | $\frac{3}{4}$ x $\frac{3}{4}$ x $\frac{3}{8}$ | 87..... | 1 x 1 x $\frac{3}{8}$                         | 90..... | 1 x 1 x 1             |



## TEES.

In describing TEES, the RUN is first named, then the outlet, thus:



| No.      |                                           | No.                   |                                            | No.               |                                            |
|----------|-------------------------------------------|-----------------------|--------------------------------------------|-------------------|--------------------------------------------|
| 100      | $\frac{1}{8}x \frac{1}{8}x \frac{1}{8}$   | C* 190                | $1\frac{1}{4}x \frac{3}{4}x 1\frac{1}{4}$  | 253               | $2\frac{1}{2}x 2\frac{1}{2}x 1\frac{1}{4}$ |
| 107      | $\frac{1}{4}x \frac{1}{4}x \frac{1}{4}$   | * 191                 | $1\frac{1}{4}x 1 x \frac{3}{8}$            | G 254             | $2\frac{1}{2}x 2\frac{1}{2}x 1\frac{1}{2}$ |
| 108      | $\frac{1}{4}x \frac{1}{4}x \frac{3}{8}$   | * 192                 | $1\frac{1}{4}x 1 x \frac{1}{2}$            | G 255             | $2\frac{1}{2}x 2\frac{1}{2}x 2$            |
| 114      | $\frac{3}{8}x \frac{1}{4}x \frac{1}{4}$   | G C 193               | $1\frac{1}{4}x 1 x \frac{3}{4}$            | G 256             | $2\frac{1}{2}x 2\frac{1}{2}x 2\frac{1}{2}$ |
| 115      | $\frac{3}{8}x \frac{1}{4}x \frac{3}{8}$   | G C 194               | $1\frac{1}{4}x 1 x 1$                      | 257               | $2\frac{1}{2}x 2 x 1\frac{1}{2}$           |
| 116      | $\frac{3}{8}x \frac{1}{4}x \frac{1}{2}$   | G C* 195              | $1\frac{1}{4}x 1 x 1\frac{1}{4}$           | 258               | $2\frac{1}{2}x 1\frac{1}{2}x 2$            |
| 120      | $\frac{3}{8}x \frac{3}{8}x \frac{1}{4}$   | C* 196                | $1\frac{1}{4}x 1 x 1\frac{1}{2}$           | 259               | $2\frac{1}{2}x 2 x 2$                      |
| C 121    | $\frac{3}{8}x \frac{3}{8}x \frac{3}{8}$   | * 197                 | $1\frac{1}{4}x 1\frac{1}{4}x \frac{3}{8}$  | 260               | $2\frac{1}{2}x 2 x 3$                      |
| C 122    | $\frac{3}{8}x \frac{3}{8}x \frac{1}{2}$   | C 198                 | $1\frac{1}{4}x 1\frac{1}{4}x \frac{1}{2}$  | 261               | $2\frac{1}{2}x 2\frac{1}{2}x 3$            |
| 128      | $\frac{1}{2}x \frac{1}{4}x \frac{3}{8}$   | G C 199               | $1\frac{1}{4}x 1\frac{1}{4}x \frac{3}{4}$  | 262               | $3 x 2 x 2$                                |
| 129      | $\frac{1}{2}x \frac{3}{8}x \frac{1}{4}$   | G C 200               | $1\frac{1}{4}x 1\frac{1}{4}x 1$            | 263               | $3 x 2 x 2\frac{1}{2}$                     |
| C 130    | $\frac{1}{2}x \frac{3}{8}x \frac{3}{8}$   | G C 201               | $1\frac{1}{4}x 1\frac{1}{4}x 1\frac{1}{4}$ | 264               | $3 x 3 x 1$                                |
| 131      | $\frac{1}{2}x \frac{3}{8}x \frac{1}{2}$   | G C* 202              | $1\frac{1}{4}x 1\frac{1}{4}x 1\frac{1}{2}$ | 265               | $3 x 3 x 1\frac{1}{4}$                     |
| 132      | $\frac{1}{2}x \frac{3}{8}x \frac{3}{4}$   | C* 205                | $1\frac{1}{2}x \frac{1}{2}x 1\frac{1}{2}$  | 266               | $3 x 3 x 1\frac{1}{2}$                     |
| 134      | $\frac{1}{2}x \frac{1}{2}x \frac{1}{4}$   | C* 206                | $1\frac{1}{2}x \frac{3}{4}x 1\frac{1}{4}$  | G 267             | $3 x 3 x 2$                                |
| C 135    | $\frac{1}{2}x \frac{1}{2}x \frac{3}{8}$   | C* 207                | $1\frac{1}{2}x \frac{3}{4}x 1\frac{1}{2}$  | G 268             | $3 x 3 x 2\frac{1}{2}$                     |
| G C 136  | $\frac{1}{2}x \frac{1}{2}x \frac{1}{2}$   | G * 210               | $1\frac{1}{2}x 1 x 1$                      | G 269             | $3 x 3 x 3$                                |
| G C 137  | $\frac{1}{2}x \frac{1}{2}x \frac{3}{4}$   | G C* 211              | $1\frac{1}{2}x 1 x 1\frac{1}{4}$           | 270               | $3 x 3 x 3\frac{1}{2}$                     |
| 146      | $\frac{3}{4}x \frac{3}{8}x \frac{1}{2}$   | C* 212                | $1\frac{1}{2}x 1 x 1\frac{1}{2}$           | 271               | $3 x 3 x 4$                                |
| 147      | $\frac{3}{4}x \frac{3}{8}x \frac{3}{4}$   | C 214                 | $1\frac{1}{2}x 1\frac{1}{4}x \frac{3}{4}$  | 272               | $3 x 2\frac{1}{2}x 2$                      |
| * 149    | $\frac{3}{4}x \frac{1}{2}x \frac{1}{4}$   | G C 215               | $1\frac{1}{2}x 1\frac{1}{4}x 1$            | 273               | $3 x 2\frac{1}{2}x 2\frac{1}{2}$           |
| 150      | $\frac{3}{4}x \frac{1}{2}x \frac{3}{8}$   | G C 216               | $1\frac{1}{2}x 1\frac{1}{4}x 1\frac{1}{4}$ | 274               | $3\frac{1}{2}x 2\frac{1}{2}x 2\frac{1}{2}$ |
| G C 151  | $\frac{3}{4}x \frac{1}{2}x \frac{1}{2}$   | G C* 217              | $1\frac{1}{2}x 1\frac{1}{4}x 1\frac{1}{2}$ | 275               | $3\frac{1}{2}x 3 x 2\frac{1}{2}$           |
| G C 152  | $\frac{3}{4}x \frac{1}{2}x \frac{3}{4}$   | * 219                 | $1\frac{1}{2}x 1 x \frac{3}{8}$            | 276               | $3\frac{1}{2}x 2\frac{1}{2}x 3$            |
| C* 153   | $\frac{3}{4}x \frac{1}{2}x 1$             | * 220                 | $1\frac{1}{2}x 1\frac{1}{2}x \frac{1}{2}$  | 279               | $3\frac{1}{2}x 3\frac{1}{2}x 2$            |
| 154      | $\frac{3}{4}x \frac{3}{4}x \frac{1}{4}$   | G C 221               | $1\frac{1}{2}x 1\frac{1}{2}x \frac{3}{4}$  | 280               | $3\frac{1}{2}x 3\frac{1}{2}x 2\frac{1}{2}$ |
| G 155    | $\frac{3}{4}x \frac{3}{4}x \frac{3}{8}$   | G C 222               | $1\frac{1}{2}x 1\frac{1}{2}x 1$            | 281               | $3\frac{1}{2}x 3\frac{1}{2}x 3$            |
| G C 156  | $\frac{3}{4}x \frac{3}{4}x \frac{1}{2}$   | G C 223               | $1\frac{1}{2}x 1\frac{1}{2}x 1\frac{1}{4}$ | 282               | $3\frac{1}{2}x 3\frac{1}{2}x 3\frac{1}{2}$ |
| G C 157  | $\frac{3}{4}x \frac{3}{4}x \frac{3}{4}$   | G C 224               | $1\frac{1}{2}x 1\frac{1}{2}x 1\frac{1}{2}$ | 285               | $4 x 3 x 3$                                |
| G C 158  | $\frac{3}{4}x \frac{3}{4}x 1$             | * 224 $\frac{1}{2}$   | $1\frac{1}{2}x 1\frac{1}{4}x 2$            | 287               | $4 x 3\frac{1}{2}x 3$                      |
| * 162    | $1 x \frac{3}{8}x \frac{3}{4}$            | G C* 225              | $1\frac{1}{2}x 1\frac{1}{2}x 2$            | 289               | $4 x 3 x 3\frac{1}{2}$                     |
| * 163    | $1 x \frac{3}{8}x 1$                      | * 226                 | $2 x \frac{1}{2}x 2$                       | 291               | $4 x 4 x 2$                                |
| * 166    | $1 x \frac{1}{2}x \frac{1}{2}$            | C* 226 $\frac{1}{2}$  | $2 x \frac{3}{4}x 2$                       | 292               | $4 x 4 x 2\frac{1}{2}$                     |
| C 167    | $1 x \frac{1}{2}x \frac{3}{4}$            | C* 227                | $2 x 1 x 2$                                | 293               | $4 x 4 x 3$                                |
| * 168    | $1 x \frac{1}{2}x 1$                      | G * 227 $\frac{1}{2}$ | $2 x 1\frac{1}{4}x 1\frac{1}{4}$           | 294               | $4 x 4 x 3\frac{1}{2}$                     |
| * 170    | $1 x \frac{3}{4}x \frac{3}{8}$            | C 228                 | $2 x 1\frac{1}{4}x 1\frac{1}{2}$           | G 295             | $4 x 4 x 4$                                |
| G C 171  | $1 x \frac{3}{4}x \frac{1}{2}$            | C* 230                | $2 x 1\frac{1}{4}x 2$                      | 296               | $4\frac{1}{2}x 4\frac{1}{2}x 4\frac{1}{2}$ |
| G C 172  | $1 x \frac{3}{4}x \frac{3}{4}$            | G C 231               | $2 x 1\frac{1}{2}x 1\frac{1}{4}$           | 296 $\frac{1}{2}$ | $5 x 4 x 4$                                |
| G C* 173 | $1 x \frac{3}{4}x 1$                      | G C 232               | $2 x 1\frac{1}{2}x 1\frac{1}{2}$           | 297               | $5 x 5 x 3$                                |
| C* 174   | $1 x \frac{3}{4}x 1\frac{1}{4}$           | C* 233                | $2 x 1\frac{1}{2}x 2$                      | 298               | $5 x 5 x 4$                                |
| 175      | $1 x 1 x \frac{1}{4}$                     | 234                   | $2 x 1\frac{1}{2}x 2\frac{1}{2}$           | 299               | $5 x 5 x 5$                                |
| 176      | $1 x 1 x \frac{3}{8}$                     | * 235                 | $2 x 2 x \frac{1}{2}$                      | 300               | $6 x 5 x 5$                                |
| G C 177  | $1 x 1 x \frac{1}{2}$                     | C 236                 | $2 x 2 x \frac{3}{4}$                      | 301               | $6 x 6 x 3$                                |
| G C 178  | $1 x 1 x \frac{3}{4}$                     | G C 237               | $2 x 2 x 1$                                | 302               | $6 x 6 x 4$                                |
| G C 179  | $1 x 1 x 1$                               | G C 238               | $2 x 2 x 1\frac{1}{4}$                     | 303               | $6 x 6 x 5$                                |
| G C* 180 | $1 x 1 x 1\frac{1}{4}$                    | G C 239               | $2 x 2 x 1\frac{1}{2}$                     | 304               | $6 x 6 x 6$                                |
| * 182    | $1\frac{1}{4}x \frac{3}{8}x 1\frac{1}{4}$ | G C 240               | $2 x 2 x 2$                                | 305               | $7 x 7 x 7$                                |
| * 184    | $1\frac{1}{4}x \frac{1}{2}x 1$            | 249                   | $2 x 2 x 2\frac{1}{2}$                     | 308               | $8 x 8 x 8$                                |
| C* 185   | $1\frac{1}{4}x \frac{1}{2}x 1\frac{1}{4}$ | 251                   | $2\frac{1}{2}x 2\frac{1}{2}x \frac{3}{4}$  | 309               | $9 x 9 x 9$                                |
| * 188    | $1\frac{1}{4}x \frac{3}{4}x \frac{3}{4}$  | 252                   | $2\frac{1}{2}x 2\frac{1}{2}x 1$            | 310               | $10 x 10 x 10$                             |
| C 189    | $1\frac{1}{4}x \frac{3}{4}x 1$            |                       |                                            |                   |                                            |



## CROSSES.

The outlets of a Cross are always the same size, and both denoted by the last figure.



| No.        | Outlets.                                      | No.         | Outlets.                                       | No.                     | Outlets.                                         |
|------------|-----------------------------------------------|-------------|------------------------------------------------|-------------------------|--------------------------------------------------|
| 311.....   | $\frac{3}{8}$ x $\frac{1}{4}$ x $\frac{1}{4}$ | *360.....   | $\frac{1}{4}$ x $\frac{1}{4}$ x $\frac{3}{8}$  | 388.....                | $\frac{21}{2}$ x $\frac{21}{2}$ x $\frac{11}{4}$ |
| 312.....   | $\frac{3}{8}$ x $\frac{3}{8}$ x $\frac{1}{4}$ | *361.....   | $\frac{1}{4}$ x $\frac{1}{4}$ x $\frac{1}{2}$  | 389.....                | $\frac{21}{2}$ x $\frac{21}{2}$ x $\frac{11}{2}$ |
| 313.....   | $\frac{3}{8}$ x $\frac{3}{8}$ x $\frac{3}{8}$ | *362.....   | $\frac{1}{4}$ x $\frac{1}{4}$ x $\frac{3}{4}$  | 390.....                | $\frac{21}{2}$ x $\frac{21}{2}$ x 2              |
| 316.....   | $\frac{1}{2}$ x $\frac{3}{8}$ x $\frac{1}{4}$ | C *363..... | $\frac{1}{4}$ x $\frac{1}{4}$ x 1              | 391.....                | $\frac{21}{2}$ x $\frac{21}{2}$ x $\frac{21}{2}$ |
| 317.....   | $\frac{1}{2}$ x $\frac{3}{8}$ x $\frac{3}{8}$ | C *364..... | $\frac{1}{4}$ x $\frac{1}{4}$ x $\frac{11}{4}$ | 392.....                | 3 x 3 x 2                                        |
| 319.....   | $\frac{1}{2}$ x $\frac{1}{2}$ x $\frac{1}{4}$ | C *367..... | $\frac{1}{2}$ x $\frac{1}{4}$ x 1              | 393.....                | 3 x 3 x $2\frac{1}{2}$                           |
| 320.....   | $\frac{1}{2}$ x $\frac{1}{2}$ x $\frac{3}{8}$ | *368.....   | $\frac{1}{2}$ x $\frac{1}{4}$ x $\frac{11}{4}$ | 394.....                | 3 x 3 x 3                                        |
| 321.....   | $\frac{1}{2}$ x $\frac{1}{2}$ x $\frac{1}{2}$ | *369.....   | $\frac{1}{2}$ x $\frac{1}{2}$ x $\frac{3}{8}$  | 394 $\frac{1}{2}$ ..... | $\frac{31}{2}$ x $\frac{31}{2}$ x $\frac{21}{2}$ |
| 330.....   | $\frac{3}{4}$ x $\frac{1}{2}$ x $\frac{3}{8}$ | *370.....   | $\frac{1}{2}$ x $\frac{1}{2}$ x $\frac{1}{2}$  | 395.....                | $\frac{31}{2}$ x $\frac{31}{2}$ x 3              |
| 331.....   | $\frac{3}{4}$ x $\frac{1}{2}$ x $\frac{1}{2}$ | *371.....   | $\frac{1}{2}$ x $\frac{1}{2}$ x $\frac{3}{4}$  | 396.....                | $\frac{31}{2}$ x $\frac{31}{2}$ x $\frac{31}{2}$ |
| 334.....   | $\frac{3}{4}$ x $\frac{3}{4}$ x $\frac{3}{8}$ | C *372..... | $\frac{1}{2}$ x $\frac{1}{2}$ x 1              | 397.....                | 4 x 4 x 3                                        |
| 335.....   | $\frac{3}{4}$ x $\frac{3}{4}$ x $\frac{1}{2}$ | C *373..... | $\frac{1}{2}$ x $\frac{1}{2}$ x $\frac{11}{4}$ | 398.....                | 4 x 4 x $3\frac{1}{2}$                           |
| C 336..... | $\frac{3}{4}$ x $\frac{3}{4}$ x $\frac{3}{4}$ | C *374..... | $\frac{1}{2}$ x $\frac{1}{2}$ x $\frac{11}{2}$ | 399.....                | 4 x 4 x 4                                        |
| 346.....   | 1 x $\frac{3}{4}$ x $\frac{1}{2}$             | *376.....   | 2 x $\frac{1}{2}$ x $\frac{11}{4}$             | 399 $\frac{1}{4}$ ..... | $\frac{41}{2}$ x $\frac{41}{2}$ x $\frac{41}{2}$ |
| C 347..... | 1 x $\frac{3}{4}$ x $\frac{3}{4}$             | *379.....   | 2 x 2 x $\frac{1}{2}$                          | 399 $\frac{1}{2}$ ..... | 5 x 5 x 5                                        |
| 350.....   | 1 x 1 x $\frac{3}{8}$                         | *380.....   | 2 x 2 x $\frac{3}{4}$                          | 400.....                | 6 x 6 x 6                                        |
| 351.....   | 1 x 1 x $\frac{1}{2}$                         | C *381..... | 2 x 2 x 1                                      | 400 $\frac{1}{2}$ ..... | 7 x 7 x 7                                        |
| C 352..... | 1 x 1 x $\frac{3}{4}$                         | C *382..... | 2 x 2 x $\frac{11}{4}$                         | 401.....                | 8 x 8 x 8                                        |
| C 353..... | 1 x 1 x 1                                     | C *383..... | 2 x 2 x $\frac{11}{2}$                         | 401 $\frac{1}{2}$ ..... | 9 x 9 x 9                                        |
| *357.....  | $\frac{1}{4}$ x 1 x $\frac{3}{4}$             | C *384..... | 2 x 2 x 2                                      | 401 $\frac{3}{4}$ ..... | 10 x 10 x 10                                     |
| *358.....  | $\frac{1}{4}$ x 1 x 1                         | 387.....    | $\frac{21}{2}$ x 2 x $\frac{11}{2}$            |                         |                                                  |

## DROP ELBOWS.



| No.        | Female.                       | Drop.         |
|------------|-------------------------------|---------------|
| 402.....   | $\frac{1}{4}$ x $\frac{1}{4}$ | $\frac{1}{4}$ |
| 403.....   | $\frac{3}{8}$ x $\frac{1}{4}$ | $\frac{1}{4}$ |
| 404.....   | $\frac{3}{4}$ x $\frac{3}{8}$ | $\frac{3}{8}$ |
| G 406..... | $\frac{1}{2}$ x $\frac{1}{2}$ | $\frac{1}{2}$ |
| G 407..... | $\frac{3}{4}$ x $\frac{3}{4}$ | $\frac{3}{4}$ |

## DROP ELBOWS.



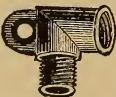
| No.                                   | Male and Female.              | Drop.         |
|---------------------------------------|-------------------------------|---------------|
| 413.....                              | $\frac{1}{4}$ x $\frac{3}{8}$ | $\frac{3}{8}$ |
| 414.....                              | $\frac{3}{8}$ x $\frac{3}{8}$ | $\frac{3}{8}$ |
| 415.....                              | $\frac{1}{2}$ x $\frac{3}{8}$ | $\frac{3}{8}$ |
| With Drop $2\frac{1}{2}$ inches long. |                               |               |
| 422.....                              | $\frac{3}{8}$ x $\frac{3}{8}$ | $\frac{3}{8}$ |
| 423.....                              | $\frac{1}{4}$ x $\frac{3}{8}$ | $\frac{3}{8}$ |

## DROP ELBOWS.



| No.      | Flanges Right Side.           | Drop.         |
|----------|-------------------------------|---------------|
| 431..... | $\frac{1}{4}$ x $\frac{3}{8}$ | $\frac{3}{8}$ |
| 432..... | $\frac{3}{8}$ x $\frac{3}{8}$ | $\frac{3}{8}$ |

## DROP ELBOWS.



| No.      | Flanges Left Side.            | Drop.         |
|----------|-------------------------------|---------------|
| 436..... | $\frac{1}{4}$ x $\frac{3}{8}$ | $\frac{3}{8}$ |
| 437..... | $\frac{3}{8}$ x $\frac{3}{8}$ | $\frac{3}{8}$ |

## DROP TEES.



| No.        | Female.                                       | Drop.         |
|------------|-----------------------------------------------|---------------|
| 449.....   | $\frac{3}{8}$ x $\frac{3}{8}$ x $\frac{1}{4}$ | $\frac{1}{4}$ |
| 450.....   | $\frac{3}{8}$ x $\frac{3}{8}$ x $\frac{3}{8}$ | $\frac{3}{8}$ |
| 452.....   | $\frac{1}{2}$ x $\frac{3}{8}$ x $\frac{3}{8}$ | $\frac{3}{8}$ |
| 454.....   | $\frac{1}{2}$ x $\frac{1}{2}$ x $\frac{3}{8}$ | $\frac{3}{8}$ |
| G 455..... | $\frac{1}{2}$ x $\frac{1}{2}$ x $\frac{1}{2}$ | $\frac{1}{2}$ |
| 458.....   | $\frac{3}{4}$ x $\frac{1}{2}$ x $\frac{3}{8}$ | $\frac{3}{8}$ |
| 460.....   | $\frac{3}{4}$ x $\frac{3}{4}$ x $\frac{3}{8}$ | $\frac{3}{8}$ |
| 463.....   | 1 x $\frac{3}{4}$ x $\frac{3}{8}$             | $\frac{3}{8}$ |
| 466.....   | 1 x 1 x $\frac{3}{8}$                         | $\frac{3}{8}$ |

## DROP TEES.



| No.                                   | Male and Female.                              | Drop.         |
|---------------------------------------|-----------------------------------------------|---------------|
| 471.....                              | $\frac{1}{4}$ x $\frac{1}{4}$ x $\frac{3}{8}$ | $\frac{3}{8}$ |
| 472.....                              | $\frac{3}{8}$ x $\frac{1}{4}$ x $\frac{3}{8}$ | $\frac{3}{8}$ |
| 473.....                              | $\frac{3}{8}$ x $\frac{3}{8}$ x $\frac{3}{8}$ | $\frac{3}{8}$ |
| 474.....                              | $\frac{1}{2}$ x $\frac{3}{8}$ x $\frac{3}{8}$ | $\frac{3}{8}$ |
| 475.....                              | $\frac{1}{2}$ x $\frac{1}{2}$ x $\frac{3}{8}$ | $\frac{3}{8}$ |
| 476.....                              | $\frac{3}{4}$ x $\frac{1}{2}$ x $\frac{3}{8}$ | $\frac{3}{8}$ |
| 477.....                              | $\frac{3}{4}$ x $\frac{3}{4}$ x $\frac{3}{8}$ | $\frac{3}{8}$ |
| 478.....                              | 1 x $\frac{3}{4}$ x $\frac{3}{8}$             | $\frac{3}{8}$ |
| 479.....                              | 1 x 1 x $\frac{3}{8}$                         | $\frac{3}{8}$ |
| With Drop $2\frac{1}{2}$ inches long. |                                               |               |
| 480.....                              | $\frac{3}{8}$ x $\frac{3}{8}$ x $\frac{3}{8}$ | $\frac{3}{8}$ |
| 481.....                              | $\frac{1}{2}$ x $\frac{3}{8}$ x $\frac{3}{8}$ | $\frac{3}{8}$ |

## CAPS.



|                         |                |
|-------------------------|----------------|
| G 486.....              | $\frac{1}{4}$  |
| G 487.....              | $\frac{3}{8}$  |
| G 488.....              | $\frac{1}{2}$  |
| G 489.....              | $\frac{3}{4}$  |
| G 490.....              | 1              |
| G 491.....              | $\frac{11}{4}$ |
| G 492.....              | $\frac{11}{2}$ |
| G 493.....              | 2              |
| G 494.....              | $2\frac{1}{2}$ |
| G 495.....              | 3              |
| G 496.....              | $3\frac{1}{2}$ |
| G 497.....              | 4              |
| 497 $\frac{1}{2}$ ..... | $4\frac{1}{2}$ |
| 498.....                | 5              |
| 499.....                | 6              |
| 499 $\frac{1}{2}$ ..... | 7              |
| 500.....                | 8              |
| 500 $\frac{1}{4}$ ..... | 9              |
| 500 $\frac{1}{2}$ ..... | 10             |

## PLUGS—Cast.



|            |                |
|------------|----------------|
| 503.....   | $\frac{1}{4}$  |
| 504.....   | $\frac{3}{8}$  |
| G 505..... | $\frac{1}{2}$  |
| G 506..... | $\frac{3}{4}$  |
| G 507..... | 1              |
| G 508..... | $\frac{11}{4}$ |
| G 509..... | $\frac{11}{2}$ |
| G 510..... | 2              |
| G 511..... | $2\frac{1}{2}$ |
| G 512..... | 3              |
| G 513..... | $3\frac{1}{2}$ |
| G 514..... | 4              |
| G 515..... | $4\frac{1}{2}$ |
| G 516..... | 5              |
| G 517..... | 6              |
| 518.....   | 7              |
| 519.....   | 8              |

## REDUCERS.



(Reducing Couplings.)

|                         |                                   |
|-------------------------|-----------------------------------|
| 521.....                | $\frac{3}{8}$ x $\frac{1}{4}$     |
| 522.....                | $\frac{1}{2}$ x $\frac{1}{4}$     |
| 523.....                | $\frac{1}{2}$ x $\frac{3}{8}$     |
| 524.....                | $\frac{3}{4}$ x $\frac{3}{8}$     |
| G 525.....              | $\frac{3}{4}$ x $\frac{1}{2}$     |
| 526.....                | 1 x $\frac{3}{8}$                 |
| 527.....                | 1 x $\frac{1}{2}$                 |
| G 528.....              | 1 x $\frac{3}{4}$                 |
| 529.....                | 1 $\frac{1}{4}$ x $\frac{1}{2}$   |
| 530.....                | 1 $\frac{1}{4}$ x $\frac{3}{4}$   |
| G 531.....              | 1 $\frac{1}{4}$ x 1               |
| 531 $\frac{1}{2}$ ..... | 1 $\frac{1}{2}$ x $\frac{1}{2}$   |
| 532.....                | 1 $\frac{1}{2}$ x $\frac{3}{4}$   |
| G 533.....              | 1 $\frac{1}{2}$ x 1               |
| G 534.....              | 1 $\frac{1}{2}$ x 1 $\frac{1}{4}$ |
| 535.....                | 2 x $\frac{3}{4}$                 |
| 536.....                | 2 x 1                             |
| G 537.....              | 2 x 1 $\frac{1}{4}$               |
| G 538.....              | 2 x 1 $\frac{1}{2}$               |
| 539.....                | 2 $\frac{1}{2}$ x 1 $\frac{1}{2}$ |
| 542.....                | 2 $\frac{1}{2}$ x 2               |
| 543.....                | 3 x 2                             |
| 547.....                | 3 x 2 $\frac{1}{2}$               |
| 548.....                | 3 $\frac{1}{2}$ x 3               |
| 550.....                | 4 x 3                             |
| 551.....                | 4 $\frac{1}{2}$ x 4               |
| 555.....                | 5 x 4                             |
| 560.....                | 6 x 5                             |

## MALLEABLE IRON COUPLINGS.



Right and Left.

|            |                 |
|------------|-----------------|
| 571.....   | $\frac{1}{4}$   |
| G 572..... | $\frac{3}{8}$   |
| G 573..... | $\frac{1}{2}$   |
| G 574..... | $\frac{3}{4}$   |
| G 575..... | 1               |
| G 576..... | 1 $\frac{1}{4}$ |
| G 577..... | 1 $\frac{1}{2}$ |
| G 578..... | 2               |

## WROUGHT IRON COUPLINGS.



Right Hand.

|            |                 |
|------------|-----------------|
| 587.....   | $\frac{1}{8}$   |
| 588.....   | $\frac{1}{4}$   |
| G 589..... | $\frac{3}{8}$   |
| 590.....   | $\frac{1}{2}$   |
| 591.....   | $\frac{3}{4}$   |
| 592.....   | 1               |
| 593.....   | 1 $\frac{1}{4}$ |
| 594.....   | 1 $\frac{1}{2}$ |
| 595.....   | 2               |
| 596.....   | 2 $\frac{1}{2}$ |
| 597.....   | 3               |

|          |                 |
|----------|-----------------|
| 598..... | 3 $\frac{1}{2}$ |
| 599..... | 4               |
| .....    | 4 $\frac{1}{2}$ |
| .....    | 5               |
| .....    | 6               |
| .....    | 7               |
| .....    | 8               |
| .....    | 9               |
| .....    | 10              |

## WASTE NUTS.



|          |               |
|----------|---------------|
| 626..... | $\frac{3}{8}$ |
|----------|---------------|

## LOCK NUTS.



|                         |                 |
|-------------------------|-----------------|
| 601.....                | $\frac{1}{4}$   |
| 602.....                | $\frac{3}{8}$   |
| 603.....                | $\frac{1}{2}$   |
| 604.....                | $\frac{3}{4}$   |
| 605.....                | 1               |
| 606.....                | 1 $\frac{1}{4}$ |
| 607.....                | 1 $\frac{1}{2}$ |
| 608.....                | 2               |
| 609.....                | 2 $\frac{1}{2}$ |
| 610.....                | 3               |
| 611.....                | 3 $\frac{1}{2}$ |
| 612.....                | 4               |
| 612 $\frac{1}{2}$ ..... | 4 $\frac{1}{2}$ |
| 613.....                | 5               |
| 613 $\frac{1}{2}$ ..... | 6               |

## WALL PLATES.

|          |               |
|----------|---------------|
| 640..... | $\frac{3}{8}$ |
|----------|---------------|

## STRAPS.



Plain or Galvanized.

|          |                 |
|----------|-----------------|
| 614..... | $\frac{1}{4}$   |
| 615..... | $\frac{3}{8}$   |
| 616..... | $\frac{1}{2}$   |
| 617..... | $\frac{3}{4}$   |
| 618..... | 1               |
| 619..... | 1 $\frac{1}{4}$ |
| 620..... | 1 $\frac{1}{2}$ |
| 621..... | 2               |

## CHANDELIER HOOKS.



|          |               |
|----------|---------------|
| 637..... | $\frac{3}{8}$ |
|----------|---------------|

## CHANDELIER LOOPS.



|          |               |
|----------|---------------|
| 636..... | $\frac{3}{8}$ |
|----------|---------------|

## EXTENSION PIECES.



Male and Female.

|          |                               |
|----------|-------------------------------|
| 561..... | $\frac{3}{8}$ x $\frac{3}{8}$ |
|----------|-------------------------------|

## RETURN BENDS.



| No.        | Open Pattern.<br>Size. | Malleable.<br>Dist. bet. Cen. |
|------------|------------------------|-------------------------------|
| 660.....   | $\frac{1}{2}$          | 1 $\frac{1}{4}$               |
| 661.....   | $\frac{3}{4}$          | 1 $\frac{1}{2}$               |
| G 662..... | 1                      | 1 $\frac{3}{8}$               |
| 663.....   | 1 $\frac{1}{4}$        | 2 $\frac{1}{4}$               |
| 664.....   | 1 $\frac{1}{2}$        | 2 $\frac{1}{2}$               |
| 665.....   | 2                      | 3                             |
| 666.....   | 2 $\frac{1}{2}$        | 4                             |

## RETURN BENDS.



| No.      | Close Pattern.<br>Size. | Cast Iron.<br>Dist. bet. Cen. |
|----------|-------------------------|-------------------------------|
| 667..... | $\frac{3}{4}$           | 1 $\frac{1}{2}$               |
| 668..... | 1                       | 1 $\frac{3}{4}$               |
| 669..... | 1 $\frac{1}{4}$         | 2 $\frac{1}{4}$               |
| 670..... | 1 $\frac{1}{2}$         | 2 $\frac{1}{2}$               |
| 671..... | 2                       | 3 $\frac{1}{4}$               |
| 672..... | 2 $\frac{1}{2}$         | 3 $\frac{3}{4}$               |
| 673..... | 3                       | 4 $\frac{1}{2}$               |

Also Cast Iron, Open Pattern.

| No.                     | Size.         | Cast Iron.<br>Dist. bet. Cen. |
|-------------------------|---------------|-------------------------------|
| 667 $\frac{1}{2}$ ..... | $\frac{3}{4}$ | 1 $\frac{1}{2}$               |
| 668 $\frac{1}{2}$ ..... | 1             | 2 $\frac{1}{4}$               |
| 674.....                | 4             | 11                            |

## BUSHINGS.



|                                   |                                   |
|-----------------------------------|-----------------------------------|
| * $\frac{1}{4}$ x $\frac{1}{8}$   | 3 x 1 $\frac{1}{4}$               |
| * $\frac{3}{8}$ x $\frac{1}{8}$   | 3 x 1 $\frac{1}{2}$               |
| $\frac{3}{8}$ x $\frac{1}{4}$     | 3 x 2                             |
| $\frac{1}{2}$ x $\frac{1}{4}$     | 3 x 2 $\frac{1}{2}$               |
| $\frac{1}{2}$ x $\frac{3}{8}$     | 3 $\frac{1}{2}$ x 1 $\frac{1}{2}$ |
| $\frac{3}{4}$ x $\frac{1}{4}$     | 3 $\frac{1}{2}$ x 2               |
| $\frac{3}{4}$ x $\frac{3}{8}$     | 3 $\frac{1}{2}$ x 2 $\frac{1}{2}$ |
| $\frac{3}{4}$ x $\frac{1}{2}$     | 3 $\frac{1}{2}$ x 3               |
| 1 x $\frac{3}{8}$                 | 4 x 2                             |
| 1 x $\frac{1}{2}$                 | 4 x 2 $\frac{1}{2}$               |
| 1 x $\frac{3}{4}$                 | 4 x 3                             |
| 1 $\frac{1}{4}$ x $\frac{1}{4}$   | 4 x 3 $\frac{1}{2}$               |
| 1 $\frac{1}{4}$ x $\frac{1}{2}$   | 4 $\frac{1}{2}$ x 2 $\frac{1}{2}$ |
| 1 $\frac{1}{4}$ x 1               | 4 $\frac{1}{2}$ x 3               |
| 1 $\frac{1}{2}$ x $\frac{3}{4}$   | 4 $\frac{1}{2}$ x 3 $\frac{1}{2}$ |
| 1 $\frac{1}{2}$ x 1               | 4 $\frac{1}{2}$ x 4               |
| 1 $\frac{1}{2}$ x 1 $\frac{1}{4}$ | 5 x 3                             |
| 2 x $\frac{3}{4}$                 | 5 x 3 $\frac{1}{2}$               |
| 2 x 1                             | 5 x 4                             |
| 2 x 1 $\frac{1}{4}$               | 5 x 4 $\frac{1}{2}$               |
| 2 x 1 $\frac{1}{2}$               | 6 x 3                             |
| 2 $\frac{1}{2}$ x 1               | 6 x 3 $\frac{1}{2}$               |
| 2 $\frac{1}{2}$ x 1 $\frac{1}{4}$ | 6 x 4                             |
| 2 $\frac{1}{2}$ x 1 $\frac{1}{2}$ | 6 x 4 $\frac{1}{2}$               |
| 2 $\frac{1}{2}$ x 2               | 6 x 5                             |
| * Brass.                          | 7 x 6.                            |
|                                   | 8 x 7                             |



## REVISED CLASSIFICATION AND PRICE LIST.

(SUPERCEDING ALL PREVIOUS CLASSIFICATIONS.)

## MALLEABLE IRON FITTINGS.

FOR

STEAM, GAS AND WATER.

Adopted by Manufacturers' Association May 19th, 1886.

## CLASS A

Elbows,  $\frac{1}{8}$ ,  $\frac{1}{4}$  x  $\frac{1}{8}$ ,  $\frac{3}{8}$  x  $\frac{1}{8}$ .  
Tees,  $\frac{1}{8}$ ,  $\frac{1}{8}$  x  $\frac{1}{4}$ ,  $\frac{1}{4}$  x  $\frac{1}{8}$ ,  $\frac{3}{8}$  x  $\frac{1}{8}$ .

Price 25 cts. per pound.

Reducing Couplings,  $\frac{1}{4}$  x  $\frac{1}{8}$ ,  $\frac{3}{8}$  x  $\frac{1}{8}$ .  
Couplings, R. H.,  $\frac{1}{8}$ .

## CLASS B

Elbows and Tees from  $\frac{1}{4}$  to  $\frac{3}{4}$ , inclusive.  
Street Elbows, all sizes.  
Elbows, Side Outlets, all sizes.  
Crosses, all sizes.  
Drop L's and Drop Tees, all sizes.  
Caps and Lock-Nuts, all sizes.

Price 13 cts. per pound.


Reducing Couplings,  $\frac{3}{8}$  x  $\frac{1}{4}$  and larger.  
Extension Pieces.  
Right and Left Fittings, all sizes.  
Right Hand Couplings,  $\frac{1}{4}$  to 1.  
Waste Nuts, Chandelier Hooks.  
Return Bends, all sizes.  
Straps, all sizes.

## CLASS C

Elbows and Tees 1 x  $\frac{3}{4}$  and larger.  
R. H. Couplings,  $1\frac{1}{4}$  and larger.

Price 11 cts. per pound.

{ Such fittings in this class, as have one or more  
outlets smaller than  $\frac{3}{4}$ , will be charged in  
Class B.

 Orders for less than 25 pounds in Classes B and C will be charged at a uniform price of 13 cents per pound; and in Class A at 25 cents per pound.

IN ORDERING, BE PARTICULAR TO STATE WHETHER FOR GAS OR STEAM.

STANDARD LIST  
OF

## Galvanized Malleable Iron Fittings.

Adopted by Manufacturers' Association May 19, 1886.

ELBOWS— $\frac{3}{8}$ ,  $\frac{1}{2}$   $\frac{1}{2}$  x  $\frac{3}{8}$   $\frac{3}{4}$ ,  $\frac{3}{4}$  x  $\frac{1}{2}$  1, 1 x  $\frac{3}{4}$ ,  $1\frac{1}{4}$ ,  $1\frac{1}{4}$  x 1,  $1\frac{1}{2}$ ,  $1\frac{1}{2}$  x  $1\frac{1}{4}$ , 2, 2 x  $1\frac{1}{2}$ ,  $2\frac{1}{2}$ , 3,  $3\frac{1}{2}$ , 4.STREET ELLS— $\frac{3}{8}$ ,  $\frac{1}{2}$ ,  $\frac{3}{4}$ , 1,  $1\frac{1}{4}$ ,  $1\frac{1}{2}$ , 2.

## TEES.

| Size.                                         | Size.                                            | Size.                                            | Size.                                            |
|-----------------------------------------------|--------------------------------------------------|--------------------------------------------------|--------------------------------------------------|
| $\frac{3}{8}$ x $\frac{3}{8}$ x $\frac{3}{8}$ | 1 x $\frac{3}{4}$ x 1                            | $1\frac{1}{4}$ x $1\frac{1}{4}$ x $1\frac{1}{2}$ | 2 x 2 x $\frac{3}{4}$                            |
| $\frac{1}{2}$ x $\frac{1}{2}$ x $\frac{3}{8}$ | 1 x 1 x $\frac{1}{2}$                            | $1\frac{1}{2}$ x $1\frac{1}{4}$ x $1\frac{1}{4}$ | 2 x 2 x 1                                        |
| $\frac{1}{2}$ x $\frac{1}{2}$ x $\frac{1}{2}$ | 1 x 1 x $\frac{3}{4}$                            | $1\frac{1}{2}$ x $1\frac{1}{4}$ x $1\frac{1}{2}$ | 2 x 2 x $1\frac{1}{4}$                           |
| $\frac{1}{2}$ x $\frac{1}{2}$ x $\frac{3}{4}$ | 1 x 1 x 1                                        | $1\frac{1}{2}$ x $1\frac{1}{2}$ x $1\frac{1}{2}$ | 2 x 2 x $1\frac{1}{2}$                           |
| $\frac{3}{4}$ x $\frac{1}{2}$ x $\frac{1}{2}$ | 1 x 1 x $1\frac{1}{4}$                           | $1\frac{1}{2}$ x $1\frac{1}{2}$ x $\frac{3}{4}$  | 2 x $1\frac{1}{2}$ x 2                           |
| $\frac{3}{4}$ x $\frac{1}{2}$ x $\frac{3}{4}$ | $1\frac{1}{4}$ x 1 x 1                           | $1\frac{1}{2}$ x $1\frac{1}{2}$ x 1              | 2 x 2 x 2                                        |
| $\frac{3}{4}$ x $\frac{3}{4}$ x $\frac{3}{8}$ | $1\frac{1}{4}$ x 1 x $1\frac{1}{4}$              | $1\frac{1}{2}$ x $1\frac{1}{2}$ x $1\frac{1}{4}$ | $2\frac{1}{2}$ x $2\frac{1}{2}$ x $2\frac{1}{2}$ |
| $\frac{3}{4}$ x $\frac{3}{4}$ x $\frac{1}{2}$ | $1\frac{1}{4}$ x $1\frac{1}{4}$ x $\frac{3}{4}$  | $1\frac{1}{2}$ x $1\frac{1}{2}$ x $1\frac{1}{2}$ | 3 x 3 x 3                                        |
| $\frac{3}{4}$ x $\frac{3}{4}$ x $\frac{3}{4}$ | $1\frac{1}{4}$ x $1\frac{1}{4}$ x 1              | $1\frac{1}{2}$ x $1\frac{1}{2}$ x 2              | $3\frac{1}{2}$ x $3\frac{1}{2}$ x $3\frac{1}{2}$ |
| $\frac{3}{4}$ x $\frac{3}{4}$ x 1             | $1\frac{1}{4}$ x $1\frac{1}{4}$ x $1\frac{1}{4}$ | 2 x $1\frac{1}{2}$ x $1\frac{1}{2}$              | 4 x 4 x 4                                        |
| 1 x $\frac{3}{4}$ x $\frac{3}{4}$             | $1\frac{1}{4}$ x $1\frac{1}{4}$ x $1\frac{1}{2}$ | 2 x 2 x $\frac{1}{2}$                            |                                                  |

CAPS— $\frac{3}{8}$ ,  $\frac{1}{2}$ ,  $\frac{3}{4}$ , 1,  $1\frac{1}{4}$ ,  $1\frac{1}{2}$ , 2.COUPLINGS—Right Hand,  $\frac{1}{4}$ ,  $\frac{3}{8}$ ,  $\frac{1}{2}$ ,  $\frac{3}{4}$ , 1,  $1\frac{1}{4}$ ,  $1\frac{1}{2}$  and 2.COUPLINGS—Right and Left,  $\frac{1}{4}$ ,  $\frac{3}{8}$ ,  $\frac{1}{2}$ ,  $\frac{3}{4}$ , 1,  $1\frac{1}{4}$ ,  $1\frac{1}{2}$  and 2.COUPLINGS—Reducing,  $\frac{3}{4}$  x  $\frac{1}{2}$ , 1 x  $\frac{3}{4}$ ,  $1\frac{1}{4}$  x 1,  $1\frac{1}{2}$  x  $1\frac{1}{4}$ , 2 x  $1\frac{1}{2}$ .CROSSES—Straight Sizes,  $\frac{1}{2}$ ,  $\frac{3}{4}$ , 1,  $1\frac{1}{4}$ ,  $1\frac{1}{2}$ , and 2.LOCKNUTS— $\frac{3}{8}$ ,  $\frac{1}{2}$ ,  $\frac{3}{4}$ , 1,  $1\frac{1}{4}$ ,  $1\frac{1}{2}$  and 2.FEMALE DROP ELBOWS AND TEES— $\frac{1}{2}$ ,  $\frac{3}{4}$ .

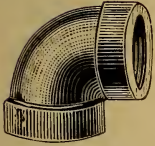
Galvanized Fittings as per Standard List.

A  
Price per lb., 35 cents.B  
20 cents.C  
18 cents.

An extra charge of 10 cents per lb. net, will be added to net price of Galvanized Fittings, not enumerated in Standard List.

# FITTINGS FOR WROUGHT IRON PIPE.

## Cast and Malleable Iron Fittings.



Cast Iron.

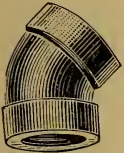


Malleable Iron.

*Reduced Fittings, the largest opening governs the price.*

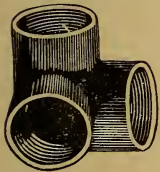
## ELBOWS.

| Size, inches.....                             | $\frac{1}{8}$ | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{3}{4}$ | 1   | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2   | $2\frac{1}{2}$ | 3    | $3\frac{1}{2}$ | 4    | $4\frac{1}{2}$ | 5    | 6     | 7    | 8     |
|-----------------------------------------------|---------------|---------------|---------------|---------------|---------------|-----|----------------|----------------|-----|----------------|------|----------------|------|----------------|------|-------|------|-------|
| Price, Cast Iron, each.....                   | ...           | .04           | .05           | .06           | .09           | .13 | .20            | .25            | .40 | .75            | 1.10 | 1.35           | 1.80 | 2.50           | 2.85 | 3.90  | 7.00 | 10.00 |
| Price, Cast Iron, Reducing<br>or R. & L.....  | ...           | .05           | .06           | .07           | .11           | .16 | .23            | .29            | .46 | .85            | 1.25 | 1.50           | 2.10 | 3.00           | 3.25 | 4.50  | 8.00 | 11.50 |
| Price, Galvanized (above 2<br>in. C. I.)..... | ...           | .06           | .09           | .12           | .18           | .30 | .45            | .55            | .85 | 1.60           | 2.35 | 3.10           | 4.10 | ...            | 7.00 | 11.00 | ...  | ...   |
| Price, Malleable Iron, each.....              | ...           | .05           | .05           | .07           | .09           | .15 | .22            | .32            | .38 | .60            | 1.25 | 1.75           | 2.10 | 4.00           | ...  | ...   | ...  | ...   |



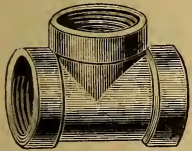
## 45° ELBOWS.

| Size, inches.....     | $\frac{1}{2}$ | $\frac{3}{4}$ | 1   | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2   | $2\frac{1}{2}$ | 3    | $3\frac{1}{2}$ | 4    | $4\frac{1}{2}$ | 5    | 6    | 7    | 8     |
|-----------------------|---------------|---------------|-----|----------------|----------------|-----|----------------|------|----------------|------|----------------|------|------|------|-------|
| Price, Cast Iron..... | .10           | .15           | .20 | .26            | .35            | .50 | 1.30           | 1.60 | 1.90           | 2.50 | 3.50           | 4.50 | 5.50 | 9.00 | 12.00 |

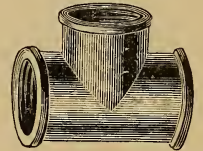


## THREE-WAY ELBOWS.

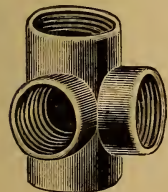
| Size, inches..... | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{3}{4}$ | 1   | $1\frac{1}{4}$ |
|-------------------|---------------|---------------|---------------|-----|----------------|
| Price, each.....  | .08           | .09           | .14           | .24 | .32            |



## TEES.



| Size, inches.....                             | $\frac{1}{8}$ | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{3}{4}$ | 1   | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2    | $2\frac{1}{2}$ | 3    | $3\frac{1}{2}$ | 4    | $4\frac{1}{2}$ | 5    | 6     | 7     | 8     |
|-----------------------------------------------|---------------|---------------|---------------|---------------|---------------|-----|----------------|----------------|------|----------------|------|----------------|------|----------------|------|-------|-------|-------|
| Price, Cast Iron, each.....                   | ...           | .06           | .07           | .09           | .13           | .20 | .30            | .38            | .60  | 1.10           | 1.50 | 2.00           | 2.50 | 3.50           | 4.00 | 5.50  | 10.00 | 15.00 |
| Price, Cast Iron, reducing.....               | ...           | .07           | .08           | .11           | .15           | .23 | .35            | .44            | .70  | 1.25           | 1.75 | 2.30           | 2.90 | 4.00           | 4.60 | 6.35  | 11.50 | 17.00 |
| Price, Mal. Iron, each.....                   | ...           | .05           | .05           | .07           | .09           | .18 | .28            | .40            | .48  | .75            | 1.40 | 2.10           | 2.50 | 4.15           | ...  | ...   | ...   | ...   |
| Price, Galvanized (above<br>2 in. C. I.)..... | ...           | .07           | .10           | .14           | .20           | .36 | .55            | .85            | 1.20 | 2.25           | 2.85 | 3.80           | 5.25 | ...            | 8.00 | 12.50 | ...   | ...   |



## FOUR-WAY TEES.

| Size, inches..... | $\frac{3}{4}$ | 1   | $1\frac{1}{4}$ |
|-------------------|---------------|-----|----------------|
| Price, each.....  | .30           | .35 | .45            |

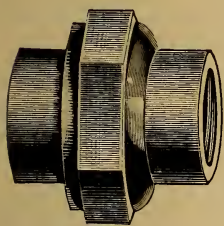






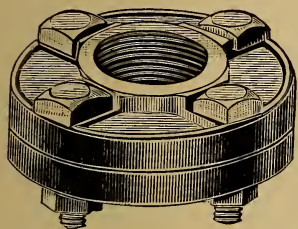
## LOCK NUTS.

| Size, inches.....          | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{3}{4}$ | 1     | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2   | $2\frac{1}{2}$ | 3     | $3\frac{1}{2}$ | 4     | $4\frac{1}{2}$ | 5     | 6     | 7     | 8     |
|----------------------------|---------------|---------------|---------------|---------------|-------|----------------|----------------|-----|----------------|-------|----------------|-------|----------------|-------|-------|-------|-------|
| Price, Cast Iron, each.... | .....         | .....         | .....         | .....         | ..... | .....          | .....          | .40 | .50            | .70   | .95            | 1.25  | 1.35           | 1.90  | 2.50  | 3.50  |       |
| Price, Malleable, each ... | .04           | .04           | .06           | .07           | .08   | .10            | .12            | .25 | .....          | ..... | .....          | ..... | .....          | ..... | ..... | ..... | ..... |



## UNIONS.

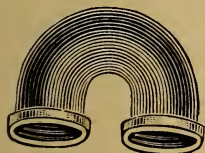
| Size, inches.....         | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{3}{4}$ | 1   | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2    | $2\frac{1}{2}$ | 3    | $3\frac{1}{2}$ | 4    |
|---------------------------|---------------|---------------|---------------|---------------|-----|----------------|----------------|------|----------------|------|----------------|------|
| Price, Malleable, each... | .15           | .18           | .20           | .28           | .34 | .46            | .60            | .80  | 1.50           | 2.10 | 3.00           | 4.00 |
| Price, Galvanized, each.  | .20           | .24           | .27           | .37           | .50 | .70            | .90            | 1.20 | 2.25           | 2.90 | 4.50           | 5.60 |



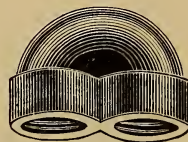
## FLANGE UNIONS.

Including Bolts and Packing.

| Size, inches,.....      | $\frac{3}{4}$ | 1   | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2    | $2\frac{1}{2}$ | 3    | $3\frac{1}{2}$ | 4    | $4\frac{1}{2}$ | 5    | 6    | 7    | 8     | 9     | 10    | 12    |
|-------------------------|---------------|-----|----------------|----------------|------|----------------|------|----------------|------|----------------|------|------|------|-------|-------|-------|-------|
| Price, Cast Iron, each. | .65           | .70 | .85            | 1.15           | 1.50 | 1.75           | 2.25 | 2.75           | 3.15 | 4.50           | 5.00 | 6.50 | 8.00 | 10.00 | 12.50 | 15.00 | 22.00 |



## RETURN BENDS.



| Close Pattern.....                     | $\frac{1}{2}$  | $\frac{3}{4}$  | 1              | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2     | $2\frac{1}{2}$ | 3              |
|----------------------------------------|----------------|----------------|----------------|----------------|----------------|-------|----------------|----------------|
| Price, Cast Iron.....                  | .10            | .15            | .22            | .34            | .45            | .75   | .....          | .....          |
| Distance Centre to Centre, inches..... | .....          | $1\frac{1}{2}$ | $1\frac{3}{4}$ | $2\frac{1}{4}$ | .....          | ..... | .....          | .....          |
| Price, Malleable Iron.....             | .10            | .15            | .22            | .34            | .45            | .75   | .....          | .....          |
| Distance Centre to Centre, inches..... | .....          | $1\frac{1}{4}$ | $1\frac{1}{2}$ | $1\frac{3}{4}$ | .....          | ..... | .....          | .....          |
| Right and Left.....                    | .....          | .17            | .25            | .40            | .52            | .86   | .....          | .....          |
| Open Pattern.....                      | .....          | .....          | .....          | .....          | .....          | ..... | .....          | .....          |
| Price, Cast Iron.....                  | .....          | .20            | .30            | .48            | .68            | 1.15  | 1.75           | 2.75           |
| Distance Centre to Centre, inches..... | .....          | $2\frac{1}{8}$ | $2\frac{1}{2}$ | $3\frac{1}{8}$ | $3\frac{1}{4}$ | 4     | 5              | $6\frac{1}{2}$ |
| Price, Malleable Iron.....             | .20            | .40            | .50            | .75            | .90            | 1.60  | 2.60           | .....          |
| Distance Centre to Centre, inches..... | $1\frac{5}{8}$ | 2              | $2\frac{1}{4}$ | $2\frac{3}{8}$ | $3\frac{1}{8}$ | 4     | $4\frac{3}{8}$ | .....          |

In ordering Return Bends for Coils, always state the length of Tubes to be used in the Coils so that the spread will be allowed for.



### BEAM HOOKS.

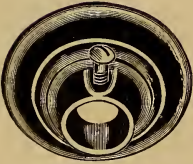
Long Shank.

|                    |               |               |     |                |                |     |                |     |
|--------------------|---------------|---------------|-----|----------------|----------------|-----|----------------|-----|
| Size, Inches ..... | $\frac{1}{2}$ | $\frac{3}{4}$ | 1   | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2   | $2\frac{1}{2}$ | 3   |
| Price, Each .....  | .11           | .12           | .16 | .18            | .20            | .28 | .56            | .75 |



### FLOOR PLATES.

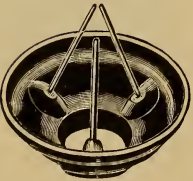
|                    |               |               |     |                |                |     |
|--------------------|---------------|---------------|-----|----------------|----------------|-----|
| Size, Inches ..... | $\frac{1}{2}$ | $\frac{3}{4}$ | 1   | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2   |
| Price, each .....  | .06           | .08           | .10 | .15            | .18            | .23 |



### CEILING PLATES.

For Wrought Iron Pipe.

|                    |               |     |                |                |     |
|--------------------|---------------|-----|----------------|----------------|-----|
| Size, Inches ..... | $\frac{3}{4}$ | 1   | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2   |
| Price, each .....  | .16           | .18 | .20            | .25            | .30 |



### CEILING PLATES—REED'S PATENT.

For Wrought Iron Pipe.

|                    |               |     |                |                |     |
|--------------------|---------------|-----|----------------|----------------|-----|
| Size, Inches ..... | $\frac{3}{4}$ | 1   | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2   |
| Price, each .....  | .16           | .18 | .20            | .25            | .30 |



### EXPANSION PIPE HANGERS, OR RING HOOKS.

|                    |               |     |                |                |     |                |     |                |      |
|--------------------|---------------|-----|----------------|----------------|-----|----------------|-----|----------------|------|
| Size, Inches ..... | $\frac{3}{4}$ | 1   | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2   | $2\frac{1}{2}$ | 3   | $3\frac{1}{2}$ | 4    |
| Price, each .....  | .22           | .25 | .30            | .38            | .44 | .55            | .65 | .90            | 1.15 |





### HOOK PLATES.

| No. of Hooks.....                                                   | 1   | 2   | 3   | 4   | 5   | 6   |
|---------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|
| For $\frac{3}{4}$ inch Pipe, 2 in. between centres, Price.          | .06 | .08 | .11 | .15 | .19 | .22 |
| For 1 inch Pipe, $2\frac{1}{2}$ in. between Centres, "              | .07 | .14 | .18 | .20 | .26 | .32 |
| For $1\frac{1}{4}$ inch Pipe, 3 in. between Centres, "              | .08 | .16 | .20 | .25 | .32 | .40 |
| For $1\frac{1}{2}$ inch Pipe, $3\frac{1}{2}$ in. between Centres, " | .12 | .24 | .30 | .36 | .45 | .60 |
| For 2 inch Pipe $4\frac{1}{2}$ in. between Centres, "               | .18 | .36 | .49 | .56 | .60 | .75 |

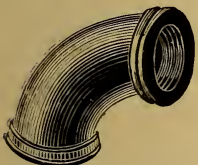


### HOOK PLATES.—Expansion.

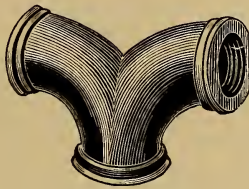
| No. of Hooks.....                                           | 1   | 2   | 3   | 4   | 5   | 6   |
|-------------------------------------------------------------|-----|-----|-----|-----|-----|-----|
| For $\frac{3}{4}$ inch Pipe, 2 in. between Centres, Price.. | .08 | .11 | .14 | .16 | .20 | .24 |
| For 1 inch Pipe, $2\frac{1}{2}$ in. between Centres, "      | .10 | .19 | .22 | .25 | .35 | .40 |
| For $1\frac{1}{4}$ inch Pipe, 3 in. between Centres, "      | .12 | .20 | .25 | .32 | .42 | .50 |

### ELBOWS AND TEES.

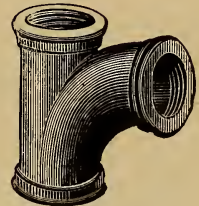
For Water Connections.—Cast Iron.



No. 1.

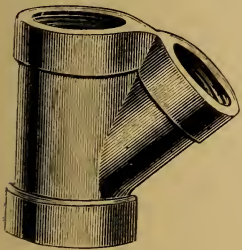


No. 2.



No. 3.

| Size, Inches.....         | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2    | $2\frac{1}{2}$ | 3    | $3\frac{1}{2}$ | 4    | $4\frac{1}{2}$ | 5     | 6     | 7     | 8     |
|---------------------------|----------------|----------------|------|----------------|------|----------------|------|----------------|-------|-------|-------|-------|
| Price, each. .... No. 1   | .39            | .70            | 1.05 | 1.80           | 2.45 | 4.00           | 5.25 | 6.70           | 8.20  | 12.00 | 19.00 | 26.00 |
| Price, each, Nos. 2 and 3 | .60            | 1.05           | 1.58 | 2.70           | 3.70 | 6.00           | 7.90 | 10.50          | 12.30 | 18.00 | 28.00 | 39.00 |



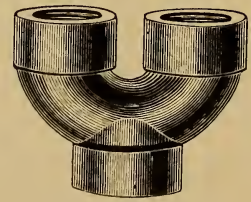
Y Bend.

Steam Engineers have found that the Standard Fittings have been cut so short that they are utterly unsuitable for Water Fittings, and also for Steam, where the full pressure is required for Engine or Steam Pumps, etc.

The Radius (as will be seen) is very much increased over that of the ordinary fittings, thus reducing the friction to a minimum.

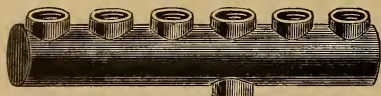
For Hydraulic and Steam Connections are invaluable.

### CAST IRON.



Return Bend Back Outlet.

| Size, Inches.....             | $\frac{1}{2}$ | $\frac{3}{4}$ | 1   | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2    | $2\frac{1}{2}$ | 3    | $3\frac{1}{2}$ | 4    | 5    | 6     | 7     | 8     |
|-------------------------------|---------------|---------------|-----|----------------|----------------|------|----------------|------|----------------|------|------|-------|-------|-------|
| Y Bend, Each.....             | .25           | .30           | .40 | .60            | .90            | 1.25 | 2.25           | 3.25 | 4.50           | 6.00 | 9.00 | 12.00 | 17.00 | 25.00 |
| Return Bend Back Outlet..Each |               | .30           | .40 | .60            | .90            | 1.25 |                |      |                |      |      |       |       |       |



BRANCH TEE FOR BOX COIL.



BRANCH TEES FOR CIRCULATION.

## Branch Tees—Cast Iron.

For Box and Circulation Coils.

| Number of Branches,                                                     |                          | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   |
|-------------------------------------------------------------------------|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| For $\frac{3}{4}$ in. Pipe,<br>2 in. Centre to Centre<br>Large Pattern, | $\frac{3}{4}$ in. inlet, | .65  | .75  | .95  | 1.15 | 1.35 | 1.55 | 1.75 | 1.95 | 2.25 | 2.60 | 3.10 |      |      |      |      |
|                                                                         | 1 " "                    | .90  | 1.00 | 1.20 | 1.40 | 1.60 | 1.80 | 2.00 | 2.20 | 2.50 | 2.85 | 3.35 |      |      |      |      |
|                                                                         | $1\frac{1}{4}$ " "       | 1.05 | 1.15 | 1.35 | 1.55 | 1.75 | 1.95 | 2.15 | 2.35 | 2.65 | 3.00 | 3.50 |      |      |      |      |
| For 1 in. Pipe,<br>$2\frac{1}{2}$ in. Cent. to Cent.<br>Large Pattern,  | 1 in. inlet,             | .90  | 1.00 | 1.20 | 1.40 | 1.70 | 2.15 | 2.40 | 2.80 | 3.30 | 4.20 | 4.75 | 5.50 | 6.25 | 7.00 | 7.75 |
|                                                                         | $1\frac{1}{4}$ " "       | 1.15 | 1.25 | 1.45 | 1.65 | 1.95 | 2.40 | 2.65 | 3.05 | 3.55 | 4.45 | 5.00 | 5.75 | 6.50 | 7.25 | 8.00 |
|                                                                         | $1\frac{1}{2}$ " "       | 1.30 | 1.40 | 1.60 | 1.80 | 2.10 | 2.55 | 2.80 | 3.20 | 3.70 | 4.60 | 5.15 | 5.90 | 6.65 | 7.40 | 8.15 |
|                                                                         | 2 " "                    | 1.55 | 1.65 | 1.85 | 2.05 | 2.35 | 2.80 | 3.05 | 3.45 | 3.95 | 4.85 | 5.40 | 6.15 | 6.90 | 7.65 | 8.40 |
| For 1 in. Pipe,<br>$2\frac{1}{2}$ in. Cent. to Cent.<br>Small Pattern,  | 1 in. inlet,             | .85  | .95  | 1.00 | 1.10 | 1.30 | 1.55 | 1.80 | 2.05 |      |      |      |      |      |      |      |
|                                                                         | $1\frac{1}{4}$ " "       | 1.10 | 1.20 | 1.25 | 1.35 | 1.55 | 1.80 | 2.05 | 2.30 |      |      |      |      |      |      |      |

## BRANCH TEES—CAST IRON.

For Circulation Coils.

| Number of Branches,                                                                      |                            | 2    | 3    | 4    | 5    | 6    | 7    | 8     | 9     | 10    |
|------------------------------------------------------------------------------------------|----------------------------|------|------|------|------|------|------|-------|-------|-------|
| For $1\frac{1}{4}$ inch Pipe,<br>3 inches Centre to Centre,<br>Large Pattern,            | $1\frac{1}{4}$ inch Inlet, | 1.25 | 1.55 | 1.90 | 2.30 | 2.80 | 3.30 | 3.80  | 4.40  | 5.00  |
|                                                                                          | $1\frac{1}{2}$ " "         | 1.50 | 1.80 | 2.15 | 2.55 | 3.05 | 3.55 | 4.05  | 4.60  | 5.25  |
|                                                                                          | 2 " "                      | 1.65 | 1.95 | 2.30 | 2.70 | 3.20 | 3.70 | 4.20  | 4.80  | 5.40  |
|                                                                                          | $2\frac{1}{2}$ " "         | 1.90 | 2.20 | 2.55 | 2.95 | 3.45 | 3.95 | 4.45  | 5.00  | 5.65  |
| For $1\frac{1}{2}$ inch Pipe,<br>$3\frac{1}{2}$ ins. Centre to Centre,<br>Large Pattern, | $1\frac{1}{2}$ " "         | 2.30 | 3.00 | 3.75 | 4.50 | 5.30 | 6.20 | 6.80  | 7.85  | 9.10  |
|                                                                                          | 2 " "                      | 2.55 | 3.25 | 4.00 | 4.75 | 5.55 | 6.45 | 7.05  | 8.10  | 9.35  |
|                                                                                          | $2\frac{1}{2}$ " "         | 2.70 | 3.40 | 4.15 | 4.90 | 5.70 | 6.60 | 7.20  | 8.25  | 9.50  |
|                                                                                          | 3 " "                      | 3.05 | 3.75 | 4.50 | 5.25 | 6.05 | 6.95 | 7.55  | 8.60  | 9.85  |
| For 2 inch Pipe,<br>$4\frac{1}{2}$ ins. Centre to Centre,<br>Large Pattern,              | 2 " "                      | 3.10 | 4.20 | 5.30 | 6.40 | 7.55 | 9.10 | 10.10 | 11.10 | 12.35 |
|                                                                                          | $2\frac{1}{2}$ " "         | 3.35 | 4.45 | 5.55 | 6.65 | 7.80 | 9.35 | 10.35 | 11.35 | 12.60 |
|                                                                                          | 3 " "                      | 3.50 | 4.60 | 5.70 | 6.80 | 7.95 | 9.50 | 10.50 | 11.50 | 12.75 |
|                                                                                          | $3\frac{1}{2}$ " "         | 3.85 | 4.95 | 6.05 | 7.15 | 8.30 | 9.85 | 10.85 | 11.85 | 13.10 |

Branch Tees not specified above will be made to order at an advance of 25 per cent.

NOTE.—Inlets and outlets same size as branches unless specially ordered.

Small Pattern for Circulation have inlet and outlet on ends.

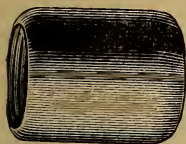
Large Pattern for Circulation have inlet and outlet on ends.

Small Pattern for Box Coils are tapped left hand and have a back outlet only.

Large Pattern for Box Coils are tapped left hand and have a back outlet only.

When Branch Tees are ordered left hand we take it for granted they are for Box Coils, and will so fill the order. If left hand are wanted for Circulation, the order must distinctly state that fact.

In all cases please state for what purpose the Branch Tees are required, Box Coils or Circulation.



## WROUGHT IRON AND RIGHT AND LEFT COUPLINGS.



| Size, inches..... | $\frac{1}{8}$ | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{3}{4}$ | 1   | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2     | $2\frac{1}{2}$ | 3     | $3\frac{1}{2}$ | 4     | $4\frac{1}{2}$ | 5     | 6     | 7     | 8     | 9     | 10    | 12    |
|-------------------|---------------|---------------|---------------|---------------|---------------|-----|----------------|----------------|-------|----------------|-------|----------------|-------|----------------|-------|-------|-------|-------|-------|-------|-------|
| Price, Plain...ea | .05           | .05           | .06           | .07           | .10           | .13 | .17            | .21            | .28   | .40            | .60   | .80            | 1.00  | 1.50           | 1.65  | 2.40  | 3.25  | 4.25  | 5.50  | 7.50  | 10.00 |
| “ Galvanized “    | .07           | .09           | .12           | .15           | .19           | .25 | .32            | .45            | .65   | .90            | 1.10  | 1.40           | 2.00  | 2.50           | 3.50  | ..... | ..... | ..... | ..... | ..... | ..... |
| “ R.&L. Mall. “   | .04           | .06           | .09           | .12           | .18           | .25 | .36            | .44            | ..... | .....          | ..... | .....          | ..... | .....          | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| “ R.&L. Galv. “   | .08           | .10           | .13           | .20           | .25           | .35 | .42            | .65            | 1.00  | 1.50           | ..... | .....          | ..... | .....          | ..... | ..... | ..... | ..... | ..... | ..... | ..... |

### WROUGHT IRON COUPLINGS, FACED.

For Lock-Nut Joints.

| Size, inches.....       | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{3}{4}$ | 1   | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2   | $2\frac{1}{2}$ | 3   |
|-------------------------|---------------|---------------|---------------|---------------|-----|----------------|----------------|-----|----------------|-----|
| Price, plain, each..... | .09           | .10           | .12           | .16           | .22 | .30            | .40            | .50 | .70            | .90 |



### LONG SCREWS.

With Coupling and Lock- Nut Faced.

| Size, inches.....                 | $\frac{1}{4}$  | $\frac{3}{8}$ | $\frac{1}{2}$  | $\frac{3}{4}$  | 1   | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2              | $2\frac{1}{2}$ | 3    |
|-----------------------------------|----------------|---------------|----------------|----------------|-----|----------------|----------------|----------------|----------------|------|
| Standard Length, inches.....      | $2\frac{1}{2}$ | 3             | $3\frac{1}{2}$ | $4\frac{1}{2}$ | 5   | $5\frac{1}{8}$ | 6              | $6\frac{1}{2}$ | 7              | 8    |
| Price, Standard Length, each..... | .30            | .35           | .40            | .55            | .75 | 1.00           | 1.30           | 1.70           | 2.70           | 3.70 |

### ROUND LOCK-NUTS, FACED.

| Size, inches.....       | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{3}{4}$ | 1   | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2   | $2\frac{1}{2}$ | 3   |
|-------------------------|---------------|---------------|---------------|---------------|-----|----------------|----------------|-----|----------------|-----|
| Price, plain, each..... | .08           | .09           | .10           | .12           | .15 | .20            | .25            | .30 | .35            | .45 |



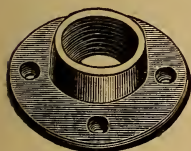
### CAST IRON FLANGES.

| Size of Pipe, inches..... | $\frac{1}{2}$ | $\frac{3}{4}$ | 1     | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2     | $2\frac{1}{2}$ | 3     | $3\frac{1}{2}$ | 4     | $4\frac{1}{2}$ | 5     | 6     | 7     | 8     | 10    |
|---------------------------|---------------|---------------|-------|----------------|----------------|-------|----------------|-------|----------------|-------|----------------|-------|-------|-------|-------|-------|
| Diam. Flange—             |               |               |       |                |                |       |                |       |                |       |                |       |       |       |       |       |
| 3 inches.....             | .17           | .18           | ..... | .....          | .....          | ..... | .....          | ..... | .....          | ..... | .....          | ..... | ..... | ..... | ..... | ..... |
| $3\frac{1}{2}$ “.....     | .20           | .21           | .22   | .25            | .....          | ..... | .....          | ..... | .....          | ..... | .....          | ..... | ..... | ..... | ..... | ..... |
| 4 “.....                  | .26           | .28           | .28   | .30            | .31            | ..... | .....          | ..... | .....          | ..... | .....          | ..... | ..... | ..... | ..... | ..... |
| $4\frac{1}{2}$ “.....     | .31           | .33           | .33   | .35            | .36            | ..... | .....          | ..... | .....          | ..... | .....          | ..... | ..... | ..... | ..... | ..... |
| 5 “.....                  | .40           | .40           | .42   | .42            | .42            | .45   | .....          | ..... | .....          | ..... | .....          | ..... | ..... | ..... | ..... | ..... |
| $5\frac{1}{2}$ “.....     | .50           | .50           | .52   | .52            | .52            | .55   | .55            | ..... | .....          | ..... | .....          | ..... | ..... | ..... | ..... | ..... |
| 6 “.....                  | .55           | .60           | .62   | .62            | .62            | .65   | .65            | .65   | .....          | ..... | .....          | ..... | ..... | ..... | ..... | ..... |
| $6\frac{1}{2}$ “.....     | .....         | .68           | .72   | .72            | .72            | .75   | .75            | .75   | .75            | ..... | .....          | ..... | ..... | ..... | ..... | ..... |
| 7 “.....                  | .....         | .80           | .80   | .80            | .80            | .80   | .80            | .84   | .87            | ..... | .....          | ..... | ..... | ..... | ..... | ..... |
| $7\frac{1}{2}$ “.....     | .....         | .90           | .90   | .90            | .90            | .90   | .96            | 1.00  | 1.04           | ..... | .....          | ..... | ..... | ..... | ..... | ..... |
| 8 “.....                  | .....         | 1.00          | 1.00  | 1.00           | 1.00           | 1.00  | 1.08           | 1.13  | 1.22           | ..... | .....          | ..... | ..... | ..... | ..... | ..... |
| $8\frac{1}{2}$ “.....     | .....         | .....         | 1.10  | 1.10           | 1.10           | 1.15  | 1.15           | 1.22  | 1.26           | 1.40  | 1.55           | 1.65  | ..... | ..... | ..... | ..... |
| 9 “.....                  | .....         | .....         | ..... | 1.20           | 1.25           | 1.30  | 1.37           | 1.55  | 1.58           | 1.70  | 1.80           | 2.20  | ..... | ..... | ..... | ..... |
| $9\frac{1}{2}$ “.....     | .....         | .....         | ..... | .....          | 1.45           | 1.45  | 1.52           | 1.75  | 1.76           | 1.90  | 2.00           | 2.40  | ..... | ..... | ..... | ..... |
| 10 “.....                 | .....         | .....         | ..... | .....          | 1.65           | 1.65  | 1.69           | 1.85  | 1.96           | 2.10  | 2.20           | 2.60  | ..... | ..... | ..... | ..... |
| $10\frac{1}{2}$ “.....    | .....         | .....         | ..... | .....          | 1.90           | 1.90  | 1.95           | 2.16  | 2.32           | 2.40  | 2.80           | ..... | ..... | ..... | ..... | ..... |
| 11 “.....                 | .....         | .....         | ..... | .....          | .....          | 2.00  | 2.12           | 2.25  | 2.36           | 2.54  | 2.60           | 3.00  | ..... | ..... | ..... | ..... |
| $11\frac{1}{2}$ “.....    | .....         | .....         | ..... | .....          | .....          | 2.25  | 2.35           | 2.50  | 2.56           | 2.76  | 2.80           | 3.20  | 3.75  | 4.00  | ..... | ..... |
| 12 “.....                 | .....         | .....         | ..... | .....          | .....          | 2.60  | 2.85           | 2.85  | 3.00           | 3.05  | 3.45           | 4.10  | 4.50  | ..... | ..... | ..... |
| 13 “.....                 | .....         | .....         | ..... | .....          | .....          | ..... | 3.50           | 3.75  | 3.75           | 3.75  | 4.50           | 5.00  | 6.00  | ..... | ..... | ..... |
| 14 “.....                 | .....         | .....         | ..... | .....          | .....          | ..... | .....          | ..... | .....          | ..... | 5.00           | 5.50  | 6.25  | 7.25  | ..... | ..... |
| 15 “.....                 | .....         | .....         | ..... | .....          | .....          | ..... | .....          | ..... | .....          | ..... | .....          | 6.25  | 6.90  | 8.00  | ..... | ..... |
| 16 “.....                 | .....         | .....         | ..... | .....          | .....          | ..... | .....          | ..... | .....          | ..... | .....          | ..... | ..... | ..... | ..... | ..... |
| 17 “.....                 | .....         | .....         | ..... | .....          | .....          | ..... | .....          | ..... | .....          | ..... | .....          | ..... | ..... | ..... | ..... | ..... |

Circle Flanges made to order at double above prices.

### FLOOR FLANGES.

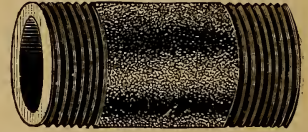
| Size of Pipe, inches.....  | $\frac{1}{2}$ | $\frac{3}{4}$ | 1     | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2     |
|----------------------------|---------------|---------------|-------|----------------|----------------|-------|
| Diam. of Flange—           |               |               |       |                |                |       |
| $3\frac{1}{2}$ inches..... | .17           | .....         | ..... | .....          | .....          | ..... |
| 4 “.....                   | .....         | .21           | .22   | .....          | .....          | ..... |
| 5 “.....                   | .....         | .....         | ..... | .35            | .36            | ..... |
| 6 “.....                   | .....         | .....         | ..... | .....          | .....          | .55   |







NIPPLES.



| Size, inches.....                 | 1⁄8   | 1⁄4 | 3⁄8 | 1⁄2 | 3⁄4 | 1   | 1¼  | 1½  | 2   | 2½    |
|-----------------------------------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| Price, Close or Short.....        | .05   | .05 | .06 | .07 | .09 | .10 | .14 | .17 | .25 | .56   |
| “ Long.....                       | .07   | .07 | .09 | .10 | .11 | .15 | .20 | .25 | .35 | .75   |
| “ 5 in. Long.....                 | .16   | .16 | .17 | .18 | .20 | .22 | .29 | .36 | .44 | ..... |
| “ 6 “.....                        | .17   | .17 | .18 | .19 | .21 | .24 | .31 | .38 | .49 | .75   |
| “ 7 “.....                        | .18   | .18 | .19 | .20 | .22 | .27 | .33 | .40 | .54 | .83   |
| “ 8 “.....                        | .19   | .19 | .20 | .21 | .23 | .29 | .35 | .42 | .59 | .91   |
| “ 9 “.....                        | .20   | .20 | .21 | .22 | .25 | .31 | .38 | .45 | .64 | 1.00  |
| “ 10 “.....                       | .21   | .21 | .22 | .23 | .27 | .33 | .40 | .48 | .69 | 1.10  |
| “ 11 “.....                       | .22   | .22 | .23 | .25 | .29 | .36 | .43 | .51 | .74 | 1.20  |
| “ 12 “.....                       | .23   | .23 | .25 | .27 | .31 | .40 | .46 | .55 | .79 | 1.30  |
| “ Close or Short, Galvanized..... | ..... | .07 | .08 | .09 | .11 | .13 | .17 | .23 | .32 | .65   |
| “ Long, Galvanized.....           | ..... | .09 | .11 | .13 | .16 | .19 | .24 | .31 | .40 | .85   |

| Size, inches.....                 | 3    | 3½    | 4     | 4½    | 5     | 6    | 7     | 8     | 9     | 10    |
|-----------------------------------|------|-------|-------|-------|-------|------|-------|-------|-------|-------|
| Price, Close or Short.....        | .75  | 1.00  | 1.25  | 1.75  | 2.00  | 2.75 | 4.00  | 5.75  | ..... | ..... |
| “ Long.....                       | .95  | 1.25  | 1.60  | 2.25  | 2.60  | 3.60 | ..... | ..... | ..... | ..... |
| “ 5 in. Long.....                 | .97  | ..... | ..... | ..... | ..... | 3.90 | 4.95  | 6.40  | 7.90  | ..... |
| “ 6 “.....                        | 1.06 | 1.38  | 1.75  | 2.20  | 2.70  | 3.30 | 4.30  | 5.40  | 7.00  | 8.65  |
| “ 7 “.....                        | 1.15 | 1.50  | 1.92  | 2.38  | 2.95  | 3.60 | 4.70  | 5.85  | 7.60  | 9.40  |
| “ 8 “.....                        | 1.24 | 1.62  | 2.10  | 2.56  | 3.20  | 3.90 | 5.10  | 6.30  | 8.20  | 10.20 |
| “ 9 “.....                        | 1.34 | 1.74  | 2.30  | 2.75  | 3.45  | 4.20 | 5.50  | 6.75  | 8.80  | 11.00 |
| “ 10 “.....                       | 1.44 | 1.86  | 2.50  | 2.94  | 3.80  | 4.50 | 5.90  | 7.20  | 9.40  | 11.80 |
| “ 11 “.....                       | 1.55 | 2.00  | 2.70  | 3.15  | 4.20  | 4.80 | 6.30  | 7.65  | 10.00 | 12.60 |
| “ 12 “.....                       | 1.66 | 2.12  | 2.85  | 3.30  | 4.40  | 5.00 | 6.60  | 8.00  | 10.50 | 13.20 |
| “ Close or Short, Galvanized..... | 1.00 | 1.25  | 1.40  | 1.90  | 2.40  | 3.50 | ..... | ..... | ..... | ..... |
| “ Long, Galvanized.....           | 1.20 | 1.50  | 1.90  | 2.40  | 3.00  | 4.40 | ..... | ..... | ..... | ..... |

| Size, inches.....     | 1⁄4 | 3⁄8 | 1⁄2 | 3⁄4 | 1   | 1¼  | 1½  | 2   | 2½   | 3    |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|------|------|
| R. and L., Short..... | .10 | .10 | .12 | .15 | .18 | .24 | .30 | .40 | 1.00 | 1.25 |
| R. and L., Long.....  | .12 | .14 | .16 | .20 | .24 | .35 | .46 | .60 | 1.30 | 1.60 |

BRASS FITTINGS.

| Size, inches.....                          | 1⁄8   | 1⁄4   | 3⁄8   | 1⁄2 | 3⁄4  | 1    | 1¼   | 1½   | 2    |
|--------------------------------------------|-------|-------|-------|-----|------|------|------|------|------|
| Elbows.....                                | .10   | .12   | .16   | .25 | .35  | .50  | .85  | 1.15 | 1.50 |
| Tees.....                                  | .12   | .15   | .20   | .30 | .45  | .70  | 1.00 | 1.25 | 1.75 |
| Crosses.....                               | ..... | .25   | .30   | .30 | .55  | .80  | 1.15 | 1.40 | 1.95 |
| Plugs.....                                 | .06   | .08   | .10   | .15 | .20  | .25  | .40  | .50  | .90  |
| Caps.....                                  | .06   | .08   | .10   | .15 | .20  | .35  | .50  | .60  | .90  |
| Lock-Nuts.....                             | ..... | .08   | .10   | .15 | .20  | .25  | .40  | .50  | .90  |
| Reducers.....                              | ..... | ..... | .25   | .30 | .45  | .60  | .80  | 1.00 | 1.25 |
| Couplings.....                             | .08   | .10   | .14   | .20 | .30  | .35  | .50  | .65  | 1.25 |
| Bushings to reduce one size.....           | ..... | .06   | .08   | .12 | .20  | .37  | .50  | .65  | .80  |
| Bushings to reduce more than one size..... | ..... | ..... | .08   | .12 | .20  | .37  | .50  | .65  | .80  |
| Return Bends, close pattern.....           | ..... | ..... | ..... | .40 | .70  | .90  | 1.25 | 2.00 | 2.75 |
| Return Bends, open pattern.....            | ..... | ..... | ..... | .50 | .80  | 1.00 | 1.50 | 2.25 | 3.00 |
| Unions.....                                | .35   | .40   | .55   | .75 | 1.00 | 1.40 | 1.90 | 2.75 | 4.00 |
| Nipples.....                               | .15   | .20   | .30   | .35 | .45  | .60  | .90  | 1.25 | 1.60 |

GAS FITTERS' HOOKS.

| Size of Pipe.....        | 1⁄4 | 3⁄8 | 1⁄2 | 3⁄4  | 1    | 1¼   | 1½   | 2    |
|--------------------------|-----|-----|-----|------|------|------|------|------|
| Hooks, per 100, net..... | .70 | .75 | .80 | 1.00 | 1.20 | 1.50 | 2.00 | 2.50 |

Wrought Iron.

MALLEABLE STRAPS.



Price per pound, Plain.....15c. | Price per pound, Galvanized.....20c.  
Price per pound, Tinned.....25c.

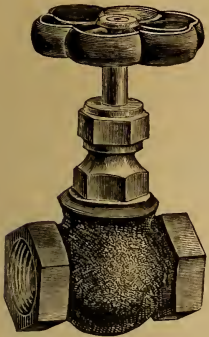


Fig. 1.

GLOBE AND ANGLE VALVES.

Brass.

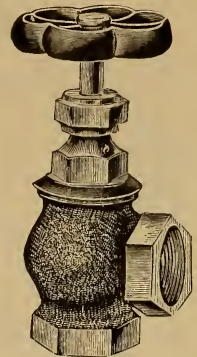


Fig. 2.

| Size, Inches.....              | $\frac{1}{8}$ | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{3}{4}$ | 1    | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2    | $2\frac{1}{2}$ | 3     |
|--------------------------------|---------------|---------------|---------------|---------------|---------------|------|----------------|----------------|------|----------------|-------|
| Price, each.....               | .60           | .60           | .75           | 1.00          | 1.35          | 1.80 | 2.80           | 3.90           | 5.90 | 11.25          | 16.00 |
| Price, Frink's Seat, each..... | .80           | .80           | 1.00          | 1.25          | 1.75          | 2.50 | 3.35           | 4.60           | 7.00 | 14.00          | 20.00 |

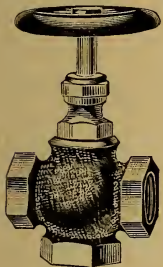


Fig. 3.

CROSS VALVES.

Brass.

| Size, Inches..... | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{3}{4}$ | 1    | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2    | $2\frac{1}{2}$ | 3     |
|-------------------|---------------|---------------|---------------|---------------|------|----------------|----------------|------|----------------|-------|
| Price, each.....  | .85           | 1.00          | 1.50          | 2.00          | 2.50 | 3.50           | 5.00           | 8.00 | 16.00          | 24.00 |



Fig. 4.

CHECK VALVES.—Brass.

Horizontal, Angle and Vertical.



Fig. 5.

| Size, Inches..... | $\frac{1}{8}$ | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{3}{4}$ | 1    | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2    | $2\frac{1}{2}$ | 3     |
|-------------------|---------------|---------------|---------------|---------------|---------------|------|----------------|----------------|------|----------------|-------|
| Price, each.....  | .50           | .50           | .60           | .85           | 1.15          | 1.55 | 2.30           | 3.25           | 5.20 | 10.00          | 14.00 |

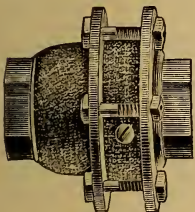


Fig. 6.

STRAIGHTWAY CHECK VALVES.

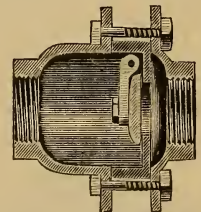


Fig. 7—Sectional View.

| Size . . . . .            | $\frac{3}{4}$ | 1     | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2     | $2\frac{1}{2}$ | 3     | $3\frac{1}{2}$ | 4     | $4\frac{1}{2}$ | 5     | 6     | 7     | 8     | 10    |
|---------------------------|---------------|-------|----------------|----------------|-------|----------------|-------|----------------|-------|----------------|-------|-------|-------|-------|-------|
| Screwed Ends.....         | 1.50          | 1.90  | 3.00           | 4.00           | 5.75  | 10.00          | 12.50 | 16.00          | 18.00 | 25.50          | 29.00 | 35.00 | 51.00 | 64.00 | ..... |
| Flanged Ends.....         | .....         | ..... | .....          | .....          | ..... | 11.00          | 14.00 | 18.00          | 20.00 | 28.00          | 32.00 | 38.00 | 54.00 | 68.00 | ..... |
| Extra Valves and Seats..  | 1.00          | 1.25  | 1.90           | 2.40           | 3.50  | 4.20           | 6.00  | 8.00           | 10.00 | 12.00          | 15.00 | 17.00 | 23.00 | 30.00 | 40.00 |
| Extra for Leather Disks.. | .20           | .20   | .20            | .20            | .30   | .40            | .50   | .60            | .80   | 1.00           | 1.20  | 1.50  | 1.80  | 2.10  | 2.50  |





Fig. 8.

## SAFETY VALVES.

Brass.

|                    |               |               |               |               |      |                |                |       |
|--------------------|---------------|---------------|---------------|---------------|------|----------------|----------------|-------|
| Size, Inches ..... | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{3}{4}$ | 1    | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2     |
| Price, each .....  | 2.00          | 2.25          | 2.75          | 3.50          | 5.00 | 7.00           | 8.50           | 12.00 |

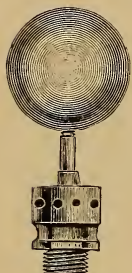


Fig. 9.

## LOW PRESSURE SAFETY VALVES.

|                   |               |               |      |                |                |       |
|-------------------|---------------|---------------|------|----------------|----------------|-------|
| Size, inches..... | $\frac{1}{2}$ | $\frac{3}{4}$ | 1    | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2     |
| Price, each.....  | 1.50          | 2.50          | 3.00 | 4.00           | 5.50           | ..... |

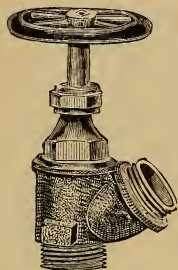


Fig. 10.

## HOSE AND GARDEN VALVES.

Brass.



Fig. 11.

|                            |               |               |       |                |                |      |                |
|----------------------------|---------------|---------------|-------|----------------|----------------|------|----------------|
| Size, Inches .....         | $\frac{1}{2}$ | $\frac{3}{4}$ | 1     | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2    | $2\frac{1}{2}$ |
| Price, each, Fig. 10 ..... | .....         | .....         | ..... | 4.00           | 5.50           | 7.00 | 10.00          |
| " " Fig. 11 .....          | 1.25          | 1.65          | 2.20  | 3.40           | 4.90           | 7.20 | .....          |

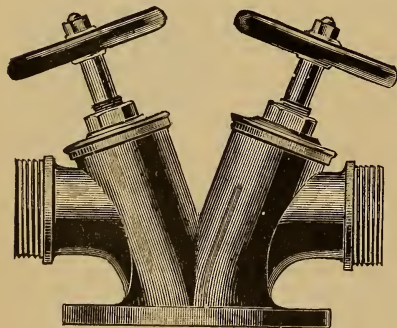


Fig. 12.

## DOUBLE HYDRANT HOSE VALVE.

Iron Body, Brass Mounted and Steam Metal.

IRON BODY, BRASS MOUNTED.

|                   |                                    |       |                                    |
|-------------------|------------------------------------|-------|------------------------------------|
| Size, Inches..... | $2\frac{1}{2} \times 1\frac{1}{2}$ | 3 x 2 | $3\frac{1}{2} \times 2\frac{1}{2}$ |
| Price, each.....  | 10.00                              | 14.00 | 22.00                              |

STEAM METAL.

|                      |                                    |       |                                    |
|----------------------|------------------------------------|-------|------------------------------------|
| Size, Inches.....    | $2\frac{1}{2} \times 1\frac{1}{2}$ | 3 x 2 | $3\frac{1}{2} \times 2\frac{1}{2}$ |
| Rough, each.....     | 18.00                              | 24.00 | 36.00                              |
| Finished, each.....  | 30.00                              | 40.00 | 60.00                              |
| For Caps, extra..... | .75                                | 1.25  | 2.00                               |

THROTTLE VALVE.

BRASS AND IRON.

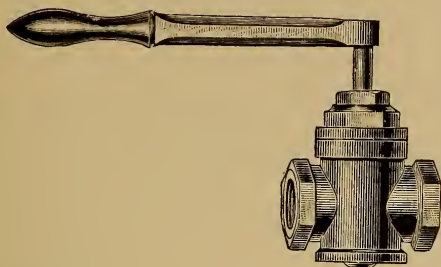


Fig. 17.

|                                  |       |       |      |       |       |       |       |       |       |       |
|----------------------------------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| Size, inches.....                | ½     | ¾     | 1    | 1¼    | 1½    | 2     | 2½    | 3     | 3½    | 4     |
| Price, Brass, each.....          | 6.50  | 7.50  | 9.00 | 11.00 | 13.00 | 20.00 | 30.00 | ..... | ..... | ..... |
| Price, Iron, Screwed, each ..... | ..... | ..... | 8.00 | 10.00 | 12.00 | 18.00 | 24.00 | 32.00 | 40.00 | 48.00 |
| Price, Iron, Flanged, each ..... | ..... | ..... | 9.00 | 11.25 | 13.50 | 19.25 | 26.00 | 35.00 | 43.50 | 52.00 |

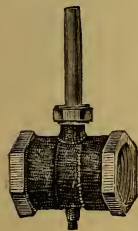


Fig. 18.

BUTTERFLY VALVES.

Brass and Iron.

|                         |       |       |       |       |       |       |       |       |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Size, inches .....      | 1     | 1¼    | 1½    | 2     | 2½    | 3     | 3½    | 4     |
| Price, Brass, each..... | 3.50  | 4.50  | 5.50  | 8.00  | 11.00 | 16.00 | ..... | ..... |
| Price, Iron, each.....  | ..... | ..... | ..... | ..... | 8.00  | 12.00 | 16.00 | 20.00 |



Fig. 19.

VACUUM VALVE.

Steam Metal.

|                   |     |      |      |      |
|-------------------|-----|------|------|------|
| Size, inches..... | ¼   | ⅜    | ½    | ¾    |
| Price, each.....  | .75 | 1.00 | 1.25 | 1.75 |

# RADIATOR VALVES.

WITH PATENT WOOD WHEELS.

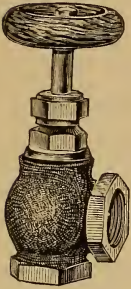


Fig. 13.

| Size, inches.....                               | $\frac{1}{2}$ | $\frac{3}{4}$ | 1    | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2    |
|-------------------------------------------------|---------------|---------------|------|----------------|----------------|------|
| Price, Brass, Each .....                        | 1.35          | 1.60          | 2.25 | 3.25           | 4.50           | 7.00 |
| Price, Nickel Plated, each.....                 | 1.65          | 1.95          | 2.65 | 3.70           | 5.00           | 7.75 |
| Price, Nickel Plated, with Frink Seat, each.... | 1.95          | 2.30          | 3.05 | 4.30           | 5.85           | 8.75 |

Tapped Left hand on bottom and Right hand on side.

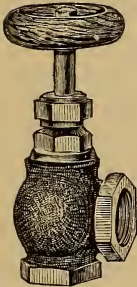


Fig. 14.

| Size, inches.....                                | $\frac{1}{2}$ | $\frac{3}{4}$ | 1    | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2    |
|--------------------------------------------------|---------------|---------------|------|----------------|----------------|------|
| Price, Brass, Each .....                         | 1.35          | 1.60          | 2.25 | 3.25           | 4.50           | 7.00 |
| Price, Nickel Plated, each.....                  | 1.65          | 1.95          | 2.65 | 3.70           | 5.00           | 7.75 |
| Price, Nickel Plated, with Frink Seat, each .... | 1.95          | 2.30          | 3.05 | 4.30           | 5.85           | 8.75 |

Tapped Right hand on bottom and Left hand on side.

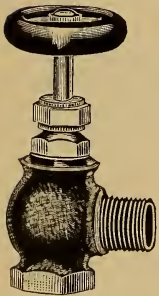


Fig. 15.

| Size, inches .....                          | $\frac{1}{2}$ | $\frac{3}{4}$ | 1    | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2    |
|---------------------------------------------|---------------|---------------|------|----------------|----------------|------|
| Price, Brass, each .....                    | 1.45          | 1.70          | 2.35 | 3.35           | 4.60           | 7.15 |
| Price, Nickel Plated, each .....            | 1.75          | 2.05          | 2.75 | 3.80           | 5.10           | 7.90 |
| Price, Rough Nickel Plated, with Frink Seat | 2.05          | 2.40          | 3.15 | 4.40           | 5.95           | 8.90 |

Tapped Left Hand on bottom and Right hand on side.

WITH MALE UNION.

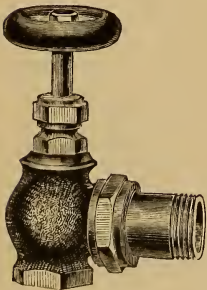


Fig. 16.

| Size, inches .....               | $\frac{1}{2}$ | $\frac{3}{4}$ | 1    | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2     |
|----------------------------------|---------------|---------------|------|----------------|----------------|-------|
| Price, Brass, each ....          | 2.05          | 2.45          | 3.25 | 4.50           | 6.50           | 10.00 |
| Price, Nickel Plated, each ..... | 2.40          | 2.85          | 3.65 | 5.05           | 7.10           | 10.85 |
| Price, " with Frink Seat, each   | 2.75          | 3.20          | 4.05 | 5.65           | 7.95           | 11.85 |

Tapped both ends Right hand.

All Radiator Valves furnished Nickel Plated, unless otherwise ordered.

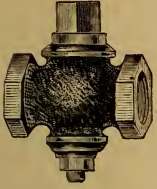


Fig. 20.

**STEAM COCKS.—Brass.**

Flat or Square Heads.

| Size, inches.....          | $\frac{1}{8}$ | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{3}{4}$ | 1    | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2    | $2\frac{1}{2}$ | 3     |
|----------------------------|---------------|---------------|---------------|---------------|---------------|------|----------------|----------------|------|----------------|-------|
| Price, each.....           | .70           | .70           | .75           | 1.10          | 1.50          | 2.25 | 3.75           | 4.80           | 7.25 | 14.00          | 20.00 |
| Check and Waste, each..... |               |               |               | 1.20          | 1.65          | 2.45 | 4.00           | 5.10           | 7.65 | 14.50          | 20.75 |
| Male and Female, each..... |               | .80           | .85           | 1.20          | 1.70          | 2.55 | 4.15           | 5.40           | 8.00 | .....          | ..... |



Fig. 21.

**STEAM COCK WRENCHES.**

Malleable Iron.

| Size, inches.....     | $\frac{1}{2}$ | $\frac{3}{4}$ | 1   | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2   | $2\frac{1}{2}$ | 3    |
|-----------------------|---------------|---------------|-----|----------------|----------------|-----|----------------|------|
| Number.....           | 3             | 4             | 5   | 6              | 7              | 8   | 9              | 10   |
| Price, each, net..... | .07           | .09           | .14 | .19            | .25            | .44 | .56            | 1.00 |

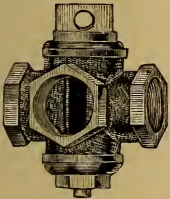


Fig. 22.

**THREE WAY COCKS.**

Brass.

| Size, inches..... | $\frac{1}{2}$ | $\frac{3}{4}$ | 1    | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2     | $2\frac{1}{2}$ | 3     |
|-------------------|---------------|---------------|------|----------------|----------------|-------|----------------|-------|
| Price, each.....  | 1.65          | 2.25          | 3.40 | 5.50           | 7.00           | 10.00 | 18.00          | 26.00 |

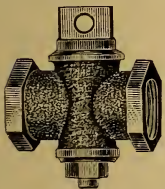


Fig. 23.

**GAS SERVICE COCKS.**

Brass.

| Size, inches.....                  | $\frac{1}{8}$ | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{3}{4}$ | 1    | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2    | $2\frac{1}{2}$ | 3     |
|------------------------------------|---------------|---------------|---------------|---------------|---------------|------|----------------|----------------|------|----------------|-------|
| Price, each.....                   | .55           | .55           | .65           | .75           | 1.00          | 1.40 | 2.20           | 3.00           | 5.60 | 10.00          | 15.00 |
| Price, Heavy, with Stop, each..... |               |               |               | 1.00          | 1.50          | 2.45 | 3.25           | 4.25           | 6.50 | .....          | ..... |
| Price, Male and Female, each.....  |               |               |               | .85           | 1.20          | 1.70 | 2.60           | 3.60           | 5.75 | 11.50          | 17.00 |

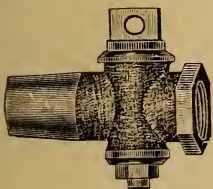


Fig. 24.

**GAS METER COCKS.**

Brass.

| Size, inches..... | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{3}{4}$ | 1    | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2    |
|-------------------|---------------|---------------|---------------|---------------|------|----------------|----------------|------|
| Price, each.....  | .70           | .80           | .85           | 1.20          | 1.70 | 2.60           | 3.60           | 5.75 |



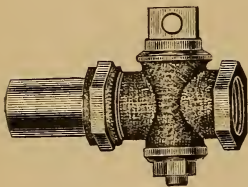


Fig. 25.

UNION METER COCKS.

Brass.

|                   |      |      |      |       |       |      |
|-------------------|------|------|------|-------|-------|------|
| Size, inches..... | 1/2  | 3/4  | 1    | 1 1/4 | 1 1/2 | 2    |
| Price, each.....  | 1.00 | 1.30 | 2.00 | 3.00  | 4.25  | 6.75 |



Fig. 26.

GAS SERVICE COCK WRENCHES.

Cast Iron.

|                      |     |     |     |       |       |     |
|----------------------|-----|-----|-----|-------|-------|-----|
| Size, inches.....    | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2   |
| Price, each, net.... | .07 | .09 | .14 | .19   | .25   | .44 |

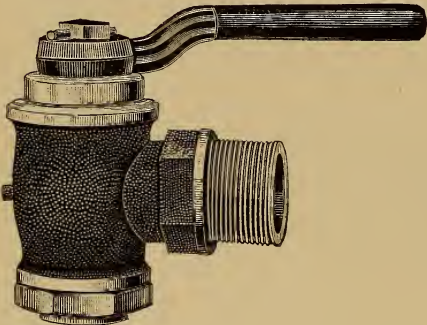


Fig. 27.

BRASS LARD TANK COCKS.

For Iron Pipe.

|                             |       |      |
|-----------------------------|-------|------|
| Size of opening, inches.... | 1 1/2 | 2    |
| Price, each.....            | 7.25  | 9.75 |

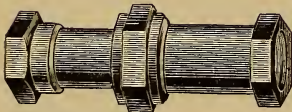


Fig. 28.

EXPANSION JOINTS.

Brass and Iron.

|                                          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |        |        |
|------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| Size, inches.....                        | 1/4   | 3/8   | 1/2   | 3/4   | 1     | 1 1/4 | 1 1/2 | 2     | 2 1/2 | 3     | 3 1/2 | 4     | 5     | 6     | 8      | 10     |
| Price, all Brass, ea.                    | 1.10  | 1.25  | 1.50  | 2.00  | 2.75  | 4.00  | 5.50  | 8.00  | 16.00 | 24.00 | ..... | ..... | ..... | ..... | .....  | .....  |
| Price, Iron Body with Brass Sleeve, each | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 11.00 | 13.00 | 17.50 | 25.00 | 30.00 | 45.00 | 55.00 | 100.00 | 185.00 |
| Traverse, inches....                     | ..... | ..... | 2     | 2     | 2 1/4 | 2 1/4 | 2 1/4 | 2 1/2 | 2 1/2 | 2 3/4 | 3     | 3 1/4 | 5     | 5     | .....  | .....  |

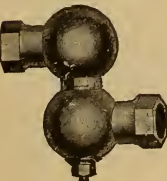


Fig. 29.

SWING JOINTS.

For Steam Pipe.

|                   |      |      |      |      |      |       |       |       |
|-------------------|------|------|------|------|------|-------|-------|-------|
| Size, inches..... | 1/4  | 3/8  | 1/2  | 3/4  | 1    | 1 1/4 | 1 1/2 | 2     |
| Price, each.....  | 1.25 | 1.50 | 2.00 | 2.75 | 4.00 | 5.00  | 7.00  | 10.00 |

# Brass Gas Fixture Fittings.

TWO-LIGHT PENDANT COCK.

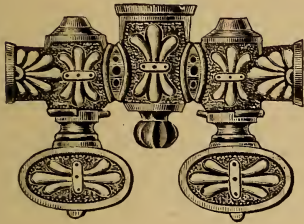


Fig. 30.

BRACKET COCK.

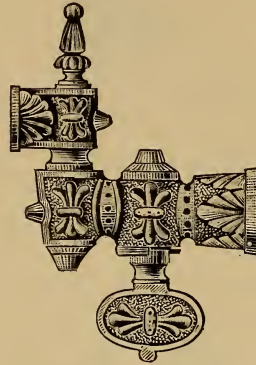


Fig. 31.

|                         |                                  |                                  |                                  |
|-------------------------|----------------------------------|----------------------------------|----------------------------------|
| Size, Fig. 30 . . . . . | $\frac{3}{8} \times \frac{1}{4}$ | $\frac{3}{8} \times \frac{1}{8}$ | $\frac{1}{4} \times \frac{1}{8}$ |
| Per dozen . . . . .     | 9.70                             | 9.70                             | 8.00                             |

|                         |                                  |                                  |                                  |
|-------------------------|----------------------------------|----------------------------------|----------------------------------|
| Size, Fig. 31 . . . . . | $\frac{3}{8} \times \frac{3}{8}$ | $\frac{3}{8} \times \frac{1}{4}$ | $\frac{3}{8} \times \frac{1}{8}$ |
| Per dozen . . . . .     | 9.50                             | 8.00                             | 7.50                             |

## UNIVERSAL BRACKET COCKS.

(NOT ILLUSTRATED.)

|                     |                                  |                                  |                                  |
|---------------------|----------------------------------|----------------------------------|----------------------------------|
| Size . . . . .      | $\frac{3}{8} \times \frac{3}{8}$ | $\frac{3}{8} \times \frac{1}{4}$ | $\frac{3}{8} \times \frac{1}{8}$ |
| Per dozen . . . . . | 13.50                            | 12.00                            | 12.00                            |

ELBOW BURNER COCK.

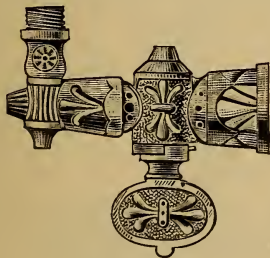


Fig. 32.

ELBOW PENDANT COCK.

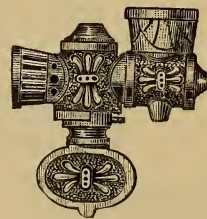


Fig. 33.

|                         |               |               |               |               |
|-------------------------|---------------|---------------|---------------|---------------|
| Size, Fig. 32 . . . . . | $\frac{1}{2}$ | $\frac{3}{8}$ | $\frac{1}{4}$ | $\frac{1}{8}$ |
| Per dozen . . . . .     | 7.00          | 6.00          | 5.25          | 4.50          |

|                         |                                  |                                  |                                  |                                  |
|-------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Size, Fig. 33 . . . . . | $\frac{3}{8} \times \frac{1}{4}$ | $\frac{3}{8} \times \frac{1}{8}$ | $\frac{1}{4} \times \frac{1}{4}$ | $\frac{1}{4} \times \frac{1}{8}$ |
| Per dozen . . . . .     | 5.40                             | 5.40                             | 5.30                             | 4.40                             |

## STRAIGHT COCK.

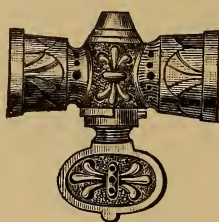


Fig. 34.

## PILLAR COCKS.

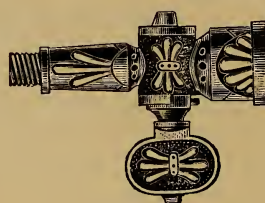


Fig. 35.

|                    |                                  |                                  |                                  |                                  |                                  |
|--------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Size, Fig. 34..... | $\frac{3}{8} \times \frac{3}{8}$ | $\frac{3}{8} \times \frac{1}{4}$ | $\frac{1}{4} \times \frac{1}{4}$ | $\frac{1}{4} \times \frac{1}{8}$ | $\frac{1}{8} \times \frac{1}{8}$ |
| Per dozen.....     | 5.40                             | 5.00                             | 4.50                             | 4.40                             | 3.50                             |
| Size, Fig. 35..... | $\frac{3}{4}$                    | $\frac{1}{2}$                    | $\frac{3}{8}$                    | $\frac{1}{4}$                    | $\frac{1}{8}$                    |
| Per dozen.....     | 7.50                             | 6.50                             | 5.25                             | 4.00                             | 3.25                             |

## REVOLVING COCK.

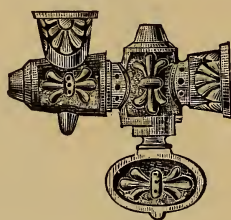


Fig. 36.

## TOP SWING.

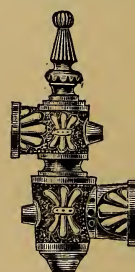


Fig. 37.

|                    |                                  |                                  |                                  |                                  |
|--------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Size, Fig. 36..... | $\frac{3}{8} \times \frac{1}{4}$ | $\frac{3}{8} \times \frac{1}{8}$ | $\frac{1}{4} \times \frac{1}{4}$ | $\frac{1}{4} \times \frac{1}{8}$ |
| Per dozen.....     | 8.00                             | 8.00                             | 7.00                             | 7.00                             |
| Size, Fig. 37..... | $\frac{3}{8} \times \frac{3}{8}$ | $\frac{3}{8} \times \frac{1}{4}$ | $\frac{3}{8} \times \frac{1}{8}$ |                                  |
| Per dozen.....     | 6.00                             | 5.00                             | 5.00                             |                                  |

## UNIVERSAL REVOLVING COCKS.

(NOT ILLUSTRATED.)

|                |                                  |                                  |                                  |                                  |
|----------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Size .....     | $\frac{3}{8} \times \frac{1}{4}$ | $\frac{3}{8} \times \frac{1}{8}$ | $\frac{1}{4} \times \frac{1}{4}$ | $\frac{1}{4} \times \frac{1}{8}$ |
| Per Dozen..... | 9.40                             | 9.40                             | 10.20                            | 10.20                            |

## MIDDLE SWING.

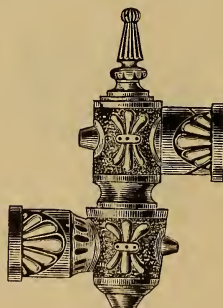


Fig. 38.

## UNIVERSAL SWING.

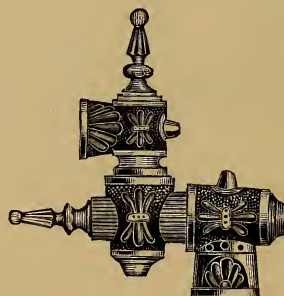


Fig. 39.

|                     |                                  |                                  |                                  |                                  |
|---------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Size, Fig. 38 ..... | $\frac{1}{4} \times \frac{1}{4}$ | $\frac{1}{4} \times \frac{1}{8}$ | $\frac{1}{8} \times \frac{1}{8}$ |                                  |
| Per dozen.....      | 4.25                             | 4.25                             | 3.75                             |                                  |
| Size, Fig. 39.....  | $\frac{3}{8} \times \frac{3}{8}$ | $\frac{3}{8} \times \frac{1}{4}$ | $\frac{1}{4} \times \frac{1}{4}$ | $\frac{1}{4} \times \frac{1}{8}$ |
| Per dozen.....      | 8.60                             | 7.90                             | 7.90                             | 7.40                             |

SIDE NOZZLES.



Fig. 40.

|                    |               |               |
|--------------------|---------------|---------------|
| Size, Fig. 40..... | $\frac{1}{4}$ | $\frac{1}{8}$ |
| Per dozen.....     | \$1.70        | 1.00          |

STRAIGHT NOZZLE.



Fig. 41.

|                    |               |               |
|--------------------|---------------|---------------|
| Size, Fig. 41..... | $\frac{1}{4}$ | $\frac{1}{8}$ |
| Per dozen.....     | \$1.70        | 1.00          |

STIFF JOINT.



Fig. 42.

CONNECTING BALL.



Fig. 43.

|                   |                                  |                                  |                                  |                                  |                                  |                                  |
|-------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Size, Fig. 42.... | $\frac{1}{2} \times \frac{1}{2}$ | $\frac{1}{2} \times \frac{3}{8}$ | $\frac{1}{2} \times \frac{1}{4}$ | $\frac{3}{8} \times \frac{3}{8}$ | $\frac{3}{8} \times \frac{1}{4}$ | $\frac{3}{8} \times \frac{1}{8}$ |
| Per dozen....     | 2.90                             | 2.00                             | 2.00                             | 1.70                             | 1.50                             | 1.40                             |

|                    |                                  |
|--------------------|----------------------------------|
| Size, Fig. 43..... | $\frac{3}{8} \times \frac{3}{8}$ |
| Per dozen.....     | 1.70                             |

STREET LAMP COCK.

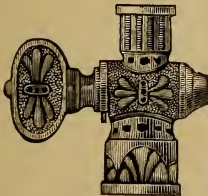


Fig. 44.

STREET LAMP COCK.

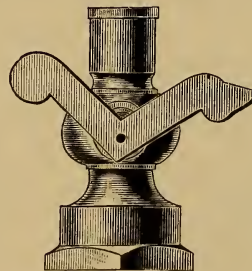


Fig. 45.

|                    |                                  |                                  |                                  |
|--------------------|----------------------------------|----------------------------------|----------------------------------|
| Size, Fig. 44..... | $\frac{3}{4} \times \frac{1}{8}$ | $\frac{1}{2} \times \frac{1}{8}$ | $\frac{3}{8} \times \frac{1}{8}$ |
| Per dozen.....     | 7.50                             | 6.50                             | 5.00                             |

|                    |                                  |                                  |
|--------------------|----------------------------------|----------------------------------|
| Size, Fig. 45..... | $\frac{3}{4} \times \frac{1}{8}$ | $\frac{1}{2} \times \frac{1}{8}$ |
| Per dozen.....     | 8.50                             | 7.50                             |







Fig. 46.

IRON GLOBE AND ANGLE VALVES.

Brass Mounted.



Fig. 47.

|                                 |      |      |       |
|---------------------------------|------|------|-------|
| Size, inches .....              | 2    | 2½   | 3     |
| Price, Screwed End, each .....  | 5.00 | 7.50 | 10.50 |
| Price, Flange End, each.....    | 6.75 | 9.50 | 13.50 |
| Diameter of Flange, inches..... | 6¾   | 6¾   | 8     |

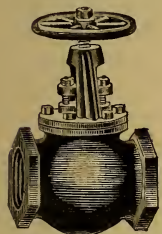


Fig. 48.

IRON GLOBE AND ANGLE VALVES.

With Yoke.

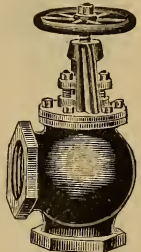


Fig. 49.

|                                   |      |       |       |       |       |       |       |       |       |        |        |        |
|-----------------------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|
| Size, inches .....                | 2    | 2½    | 3     | 3½    | 4     | 4½    | 5     | 6     | 7     | 8      | 10     | 12     |
| Price, Brass Stem, screwed... ..  | 8.00 | 10.50 | 14.50 | 18.00 | 21.00 | 28.00 | 32.00 | 44.00 | 75.00 | 97.00  | 173.00 | 252.00 |
| Price, Brass Stem, flanged ... .. | 9.75 | 12.50 | 17.50 | 21.50 | 25.00 | 32.00 | 36.00 | 49.00 | 80.00 | 103.00 | 180.00 | 262.00 |
| Diameter of Flange, inches ..     | 6    | 6½    | 7½    | 8½    | 9     | 9¾    | 10½   | 12    | 14    | 14     | 20     | 20     |
| Length face to face of Flange     | 6    | 7     | 7½    | 9     | 10    | 11    | 12¼   | 14    | 17    | 19     | 24¼    | 26¾    |

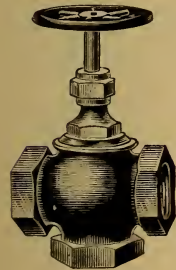


Fig. 50.

IRON CROSS VALVES.



Fig. 51.

|                                       |       |       |       |       |       |       |       |       |       |        |
|---------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| Size, inches.....                     | 2     | 2½    | 3     | 3½    | 4     | 4½    | 5     | 6     | 7     | 8      |
| Price, Screwed End, each .....        | 6.50  | 10.00 | 14.00 | ..... | ..... | ..... | ..... | ..... | ..... | .....  |
| Price, Flange End, each.....          | 9.00  | 13.00 | 18.50 | ..... | ..... | ..... | ..... | ..... | ..... | .....  |
| Price, Screwed End, Yoked, each ..... | ..... | ..... | ..... | 23.00 | 27.00 | 35.00 | 40.00 | 54.00 | 90.00 | 105.00 |
| Price, Flange End, Yoked, each .....  | ..... | ..... | ..... | 28.25 | 33.00 | 41.00 | 46.00 | 61.50 | 98.00 | 114.00 |

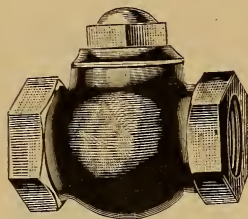


Fig. 52.

IRON CHECK VALVES.

Horizontal, Angle and Vertical.

|                           |      |      |       |       |       |       |       |       |       |       |        |        |
|---------------------------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| Size, inches. . . . .     | 2    | 2½   | 3     | 3½    | 4     | 4½    | 5     | 6     | 7     | 8     | 10     | 12     |
| Price, Screwed, each. . . | 3.75 | 6.25 | 9.75  | 12.75 | 15.00 | 20.00 | 24.00 | 33.00 | 55.00 | 81.00 | 150.00 | 210.00 |
| Price, Flanged, each. . . | 5.50 | 8.25 | 12.75 | 16.25 | 19.00 | 24.00 | 28.00 | 38.00 | 60.00 | 87.00 | 157.00 | 230.00 |

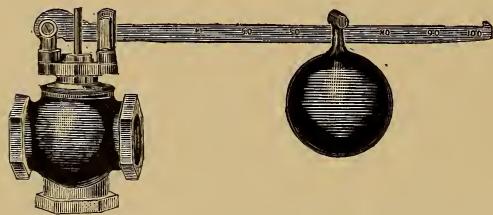


Fig. 53.

IRON SAFETY VALVES.

|                           |       |       |       |       |       |       |       |       |       |       |       |        |        |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| Size, inches. . . . .     | 1     | 1¼    | 1½    | 2     | 2½    | 3     | 3½    | 4     | 4½    | 5     | 6     | 7      | 8      |
| Price, Screwed, each. . . | 3.50  | 5.00  | 6.00  | 8.00  | 13.00 | 18.00 | 24.00 | 30.00 | 36.00 | 44.00 | 60.00 | 105.00 | 145.00 |
| Price, Flanged, each. . . | ..... | ..... | ..... | 10.50 | 16.00 | 22.50 | 29.25 | 36.00 | 42.00 | 50.00 | 67.50 | 113.00 | 154.00 |

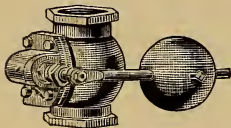


Fig. 54.

BACK PRESSURE VALVES.

|                                   |      |       |       |       |       |       |       |       |
|-----------------------------------|------|-------|-------|-------|-------|-------|-------|-------|
| Size, inches. . . . .             | 2    | 2½    | 3     | 3½    | 4     | 5     | 6     | 8     |
| Price, Screwed End, each. . . . . | 8.00 | 10.50 | 14.50 | 18.00 | 21.00 | 32.00 | 44.00 | 85.00 |
| Price, Flanged End, each. . . . . | 9.75 | 12.50 | 17.50 | 21.50 | 25.00 | 36.00 | 49.00 | 91.00 |

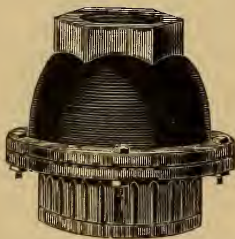


Fig. 55.

FOOT VALVES, WITH STRAINER.

|                       |      |      |      |      |      |      |      |       |       |       |       |       |
|-----------------------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|
| Size, inches. . . . . | 1    | 1¼   | 1½   | 2    | 2½   | 3    | 3½   | 4     | 5     | 6     | 7     | 8     |
| Price, each. . . . .  | 1.50 | 2.10 | 3.00 | 3.75 | 4.60 | 5.75 | 8.00 | 10.50 | 16.00 | 24.00 | 30.00 | 50.00 |

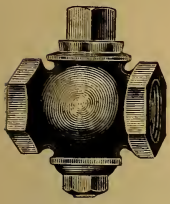


Fig. 56.

## IRON COCKS.

| Size, inches.....          | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{3}{4}$ | 1    | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2    | $2\frac{1}{2}$ | 3     | $3\frac{1}{2}$ | 4     | 5     | 6     |
|----------------------------|---------------|---------------|---------------|------|----------------|----------------|------|----------------|-------|----------------|-------|-------|-------|
| Price, Iron Plug, each.... | .75           | .80           | .90           | 1.25 | 1.50           | 2.00           | 2.60 | 4.50           | 6.50  | 12.00          | 16.00 | 33.00 | 45.00 |
| Price, Brass Plug, each... | 1.10          | 1.20          | 1.60          | 2.00 | 2.75           | 4.00           | 5.00 | 9.50           | 13.50 | 30.00          | 40.00 | ..... | ..... |

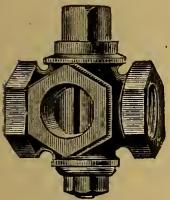


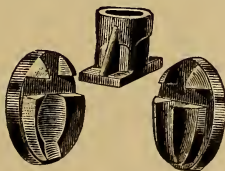
Fig. 57.

## IRON THREE-WAY COCKS.

| Size, inches.....            | $\frac{3}{4}$ | 1    | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2    | $2\frac{1}{2}$ | 3     | $3\frac{1}{2}$ | 4     |
|------------------------------|---------------|------|----------------|----------------|------|----------------|-------|----------------|-------|
| Price, Iron Plug, each.....  | 1.80          | 1.75 | 2.00           | 2.75           | 4.00 | 6.00           | 8.50  | 15.00          | 20.00 |
| Price, Brass Plug, each..... | 2.00          | 2.50 | 3.25           | 4.75           | 6.50 | 11.00          | 15.50 | 33.00          | 44.00 |

## Straightway Double Gate Valves.

## BRASS.

Fig. 58.  
Sectional Cut.

Gates.

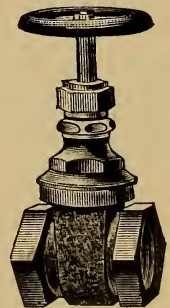
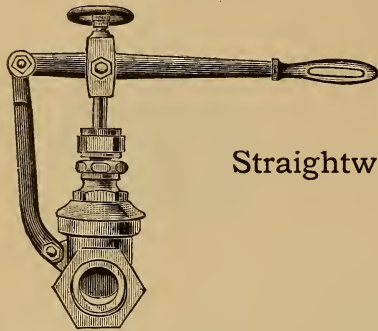


Fig. 59.

| Size.....          | $\frac{1}{8}$ | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{3}{4}$ | 1    | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2    | $2\frac{1}{2}$ | 3     |
|--------------------|---------------|---------------|---------------|---------------|---------------|------|----------------|----------------|------|----------------|-------|
| Screwed, each..... | \$1.10        | 1.10          | 1.20          | 1.20          | 1.75          | 2.50 | 3.50           | 5.00           | 7.50 | 15 00          | 22.00 |





Straightway Double Gate Valves.

Fig. 60.  
WITH QUICK MOVING SLIDE STEM  
AND LEVER.

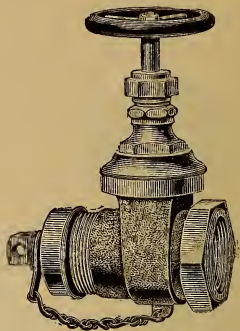


Fig. 61.  
FOR HOSE.

|                    |        |      |      |       |       |       |
|--------------------|--------|------|------|-------|-------|-------|
| Size .....         | 1      | 1¼   | 1½   | 2     | 2½    | 3     |
| Fig. 60, each..... | \$4.00 | 5.00 | 7.00 | 10.00 | 19.00 | 25.00 |

|                                            |        |      |      |       |       |       |
|--------------------------------------------|--------|------|------|-------|-------|-------|
| Size.....                                  | 1      | 1¼   | 1½   | 2     | 2½    | 3     |
| Fig. 61, Without Cap and Chain, each ..... | \$3.00 | 4.00 | 6.00 | 8.25  | 17.50 | 25.00 |
| Fig. 61, With " " " each .....             | 5.00   | 6.00 | 8.00 | 11.00 | 21.00 | 30.00 |

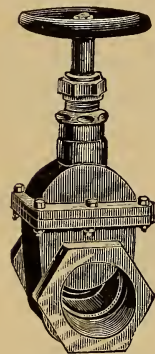


Fig. 62.

STRAIGHTWAY GATE VALVES.

Iron Body, Brass Mounted.

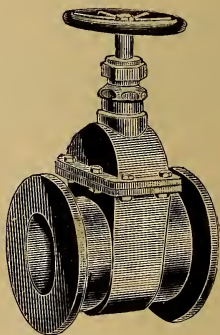


Fig. 63.

|                          |       |       |       |       |       |       |       |       |       |       |       |       |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Size, inches.....        | 2     | 2½    | 3     | 3½    | 4     | 4½    | 5     | 6     | 7     | 8     | 10    | 12    |
| Price, Screwed, each.... | 10.00 | 12.00 | 15.00 | 18.00 | 20.00 | 25.00 | 25.00 | 30.00 | 43.00 | 53.00 | 69.00 | 94.00 |
| Price, Flanged, each.... | 10.00 | 12.00 | 15.00 | 18.00 | 20.00 | 25.00 | 25.00 | 30.00 | 40.00 | 50.00 | 65.00 | 90.00 |

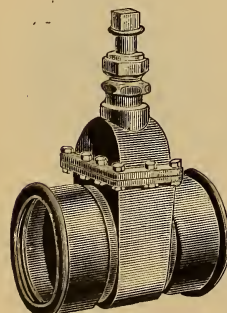


Fig. 64.

STRAIGHTWAY DOUBLE GATE VALVES.

Iron Body, Brass Mounted, Hub End.

|                   |       |       |       |       |       |       |
|-------------------|-------|-------|-------|-------|-------|-------|
| Size, inches..... | 3     | 4     | 6     | 8     | 10    | 12    |
| Price, each.....  | 15.00 | 20.00 | 30.00 | 50.00 | 65.00 | 90.00 |

WATER GAUGES.



Fig. 65.



Fig. 66.



Fig. 67.

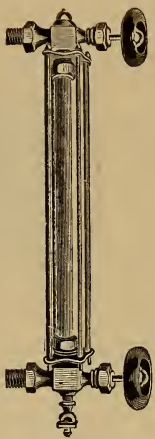


Fig. 68.

|          |           |                         |        |               |                 |       |        |
|----------|-----------|-------------------------|--------|---------------|-----------------|-------|--------|
| Fig. 65. | Rough,    | $\frac{1}{2} \times 10$ | Glass, | $\frac{3}{8}$ | Iron Pipe, each | ..... | \$2.75 |
| " 65.    | "         | $\frac{5}{8} \times 12$ | "      | $\frac{1}{2}$ | " " "           | ..... | 3.00   |
| " 66.    | "         | $\frac{5}{8} \times 12$ | "      | $\frac{1}{2}$ | " " "           | ..... | 3.50   |
| " 67.    | Finished, | $\frac{5}{8} \times 12$ | "      | $\frac{1}{2}$ | " " "           | ..... | 4.25   |
| " 68.    | "         | $\frac{5}{8} \times 12$ | "      | $\frac{1}{2}$ | " " "           | ..... | 7.00   |
| " 68.    | "         | $\frac{3}{4} \times 16$ | "      | $\frac{3}{4}$ | " " "           | ..... | 10.00  |

SCOTCH GLASS TUBES.

For Water Gauges.

|                                   |     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |
|-----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|
| Length, inches                    | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 22  | 24   | 30   | 36   | 48   |
| $\frac{3}{4}$ inch diameter, each | .55 | .55 | .55 | .65 | .65 | .65 | .65 | .70 | .75 | .80 | .85 | .95 | 1.05 | 1.50 | 2.00 | 3.00 |
| $\frac{5}{8}$ inch diameter, each | .45 | .45 | .45 | .45 | .50 | .55 | .60 | .65 | .70 | .70 | .80 |     |      |      |      |      |

Rubber Washers for same, 15 cents per dozen, net.  
Gauge Glass Cutters, \$2.50 each.  
Red Reflecting Glasses same list.

STEAM WHISTLES.



Fig. 69.

|                                         |      |      |      |      |      |
|-----------------------------------------|------|------|------|------|------|
| Diameter of Bell, inches . . . . .      | 1    | 1¼   | 1½   | 2    | 2½   |
| Size of Pipe, inches. . . . .           | ¾    | ½    | ½    | ¾    | ¾    |
| Without Valve (Fig. 65), each . . . . . | 1.70 | 2.00 | 2.50 | 3.25 | 4.50 |
| With Valve (Fig. 66), each. . . . .     | 3.50 | 3.75 | 4.00 | 4.75 | 6.50 |

|                                         |      |       |       |       |       |       |        |        |
|-----------------------------------------|------|-------|-------|-------|-------|-------|--------|--------|
| Diameter of Bell, inches . . . . .      | 3    | 3½    | 4     | 5     | 6     | 8     | 10     | 12     |
| Size of Pipe, inches . . . . .          | 1    | 1     | 1¼    | 1½    | 2     | 2½    | 3      | 3      |
| Without Valve (Fig. 69), each . . . . . | 6.00 | 8.50  | 11.00 | 18.00 | 24.00 | 65.00 | 125.00 | 250.00 |
| With Valve (Fig. 70) each . . . . .     | 8.00 | 11.00 | 14.00 | 22.00 | 30.00 | 80.00 | 175.00 | 350.00 |

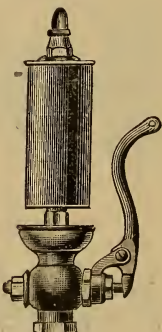


Fig. 70.

WHISTLE VALVES.

|                      |               |               |      |                |                |      |                |       |
|----------------------|---------------|---------------|------|----------------|----------------|------|----------------|-------|
| Size of Pipe, inches | $\frac{1}{2}$ | $\frac{3}{4}$ | 1    | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2    | $2\frac{1}{2}$ | 3     |
| Rough, each          | 2.25          | 2.75          | 3.25 | 4.00           | 5.50           | 9.50 | 20.00          | 30.00 |

CHIME WHISTLES.



Fig. 71.



Fig. 72.



Fig. 73.

|                                   |               |               |       |                |                |       |                |        |
|-----------------------------------|---------------|---------------|-------|----------------|----------------|-------|----------------|--------|
| Diameter of Bell, inches .....    | 2             | 3             | 4     | 5              | 6              | 8     | 10             | 12     |
| Size Steam Pipe, inches .....     | $\frac{1}{2}$ | $\frac{3}{4}$ | 1     | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2     | $2\frac{1}{2}$ | 3      |
| Fig. 71, without Valve .....      | 5.00          | 8.00          | 14.00 | 22.00          | 30.00          | 70.00 | 110.00         | 150.00 |
| Fig. 72, with Upright Valve ..... | 6.50          | 9.50          | 16.00 | 25.00          | 35.00          | 85.00 | 130.00         | 180.00 |
| Fig. 73, With Side Valve .....    | 7.00          | 11.00         | 18.00 | 28.00          | 38.00          | 90.00 | 140.00         | 200.00 |

The peculiar merit of this Whistle consists in producing three distinct tones pitched to the first, third and fifth of the common musical scale, which harmonize and give an agreeable musical chord.

GAUGE COCKS.

COMPRESSION, WITH SOFT METAL SEAT.



Fig. 74.

|                                          |               |               |               |
|------------------------------------------|---------------|---------------|---------------|
| Will Chase (Iron Pipe Size), inches..... | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{3}{4}$ |
| Diameter of Shank, inches.....           | $\frac{5}{8}$ | $\frac{3}{4}$ | 1             |
| Price, with Wood Handle, each.....       | 1.10          | 1.20          | 1.35          |

COMPRESSION, WITH STUFFING BOX. SOFT METAL SEAT.

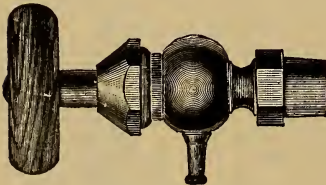


Fig. 75.

|                                          |               |               |               |
|------------------------------------------|---------------|---------------|---------------|
| Will Chase (Iron Pipe Size), inches..... | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{3}{4}$ |
| Diameter of Shank, inches.....           |               | $\frac{3}{4}$ | 1             |
| Price, with Wood Handle, each.....       | 1.30          | 1.40          | 1.55          |



Fig. 76.

MISSISSIPPI GAUGE COCKS.

|                                          |               |               |               |               |
|------------------------------------------|---------------|---------------|---------------|---------------|
| Will Chase (Iron Pipe Size), inches..... | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{1}{2}$ | $\frac{3}{4}$ |
| Diameter of Shank, inches.....           | $\frac{5}{8}$ | $\frac{3}{4}$ | $\frac{7}{8}$ | 1             |
| Price, each.....                         | .75           | 1.00          | 1.25          | 1.50          |



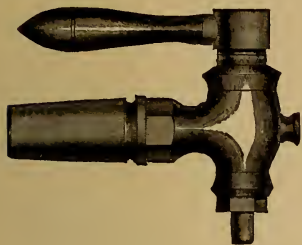


Fig. 77.

CYLINDER COCKS.

Lever and Tee Handle.

|                                 |               |               |               |               |               |                |
|---------------------------------|---------------|---------------|---------------|---------------|---------------|----------------|
| Diameter of Shank, inches . . . | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | $\frac{7}{8}$ | $1\frac{1}{8}$ |
| Price, Lever Handle, each.....  | .90           | .....         | 1.10          | 1.50          | 2.00          | 2.50           |
| Price, Tee Handle, each.....    | .75           | .85           | .95           | 1.25          | 1.75          | 2.25           |



Fig. 78.

REGESTER GAUGE COCKS.

|                                          |               |               |
|------------------------------------------|---------------|---------------|
| Diameter of Shank, inches.....           | $\frac{3}{4}$ | 1             |
| Will Chase (Iron Pipe Size), inches..... | $\frac{1}{2}$ | $\frac{3}{4}$ |
| Price, each.....                         | 2.25          | 2.25          |

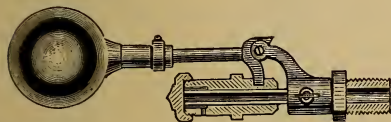


Fig. 79.

MONTGOMERY GAUGE COCKS.

|                                          |               |               |
|------------------------------------------|---------------|---------------|
| Diameter of Shank, inches.....           | $\frac{3}{4}$ | 1             |
| Will Chase (Iron Pipe Size), inches..... | $\frac{1}{2}$ | $\frac{3}{4}$ |
| Price, each.....                         | 2.25          | 2.25          |

COCKS FOR STEAM GUAGES.



Fig. 80.  
 $\frac{1}{4}$  inch, each \$0.75.



Fig. 81.  
 $\frac{1}{4}$  inch, each \$2.00.

CYLINDER COCKS.

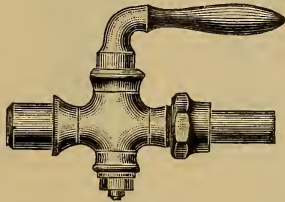


Fig. 82.

|                                  |               |               |               |                |                |                |                |
|----------------------------------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|
| Diameter of Opening, inches..... | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$  | $\frac{3}{4}$  | 1              | $1\frac{1}{4}$ |
| Diameter Blank Shanks, “ .....   | $\frac{3}{4}$ | $\frac{7}{8}$ | $\frac{7}{8}$ | $1\frac{1}{8}$ | $1\frac{1}{8}$ | $1\frac{3}{8}$ | $1\frac{3}{8}$ |
| Price, Rough, each.....          | \$1.50        | 1.75          | 2.00          | 2.50           | 3.25           | 5.00           | 8.00           |
| “ Finished, “ .....              | 1.75          | 2.00          | 2.50          | 3.00           | 3.75           | 6.00           | 9.00           |



# STEAM BIBBS.

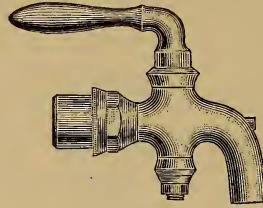


Fig. 83.

| Diameter of Opening,<br>inches.....       | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$  | $\frac{3}{4}$  | 1              | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2              | $2\frac{1}{2}$ | 3              |
|-------------------------------------------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Diameter of Blank<br>Shanks, inches . . . | $\frac{3}{4}$ | $\frac{7}{8}$ | $\frac{7}{8}$ | $1\frac{1}{8}$ | $1\frac{1}{8}$ | $1\frac{3}{8}$ | $1\frac{7}{8}$ | 2              | $2\frac{3}{8}$ | $2\frac{3}{8}$ | $3\frac{3}{8}$ |
| Price, Rough, each...                     | 1.00          | 1.25          | 1.50          | 1.75           | 2.50           | 3.50           | 5.00           | 8.00           | 15.00          | 25.00          | 35.00          |
| Price, Finished, each..                   | 1.25          | 1.50          | 2.00          | 2.25           | 3.00           | 4.50           | 6.00           | 10.00          | 18.00          | 30.00          | 40.00          |

# DAVIS PATENT AUTOMATIC AIR VALVES.



Fig. 84.



Fig. 85.



Fig. 86.



Fig. 87.



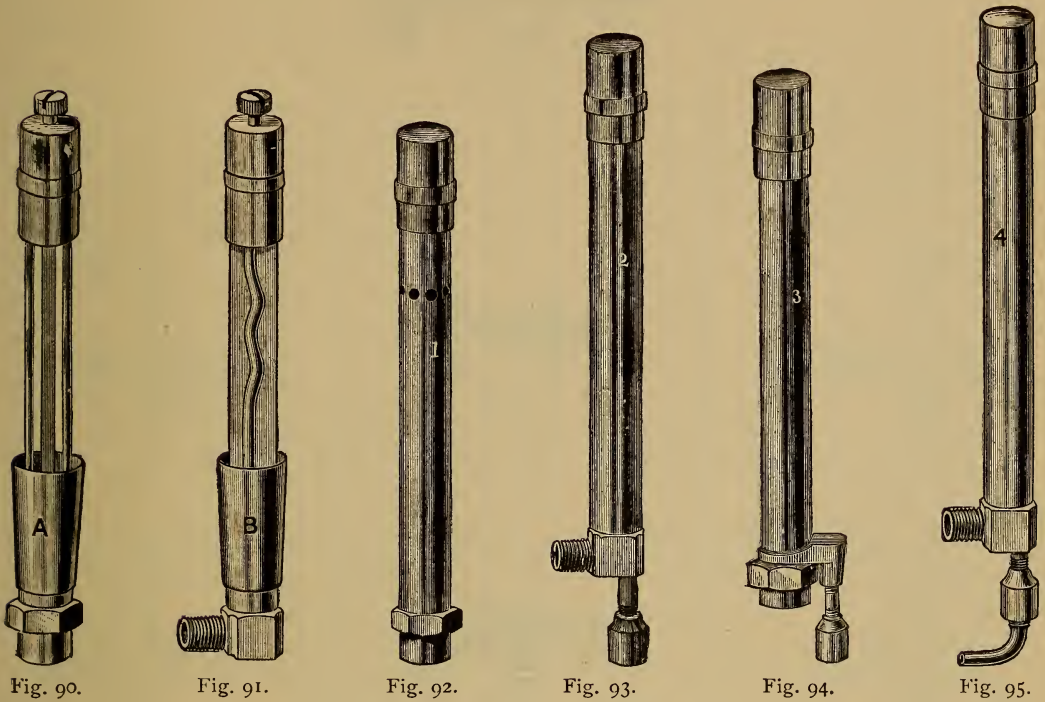
Fig. 88.



Fig. 89.

| Figure .....              | 84     | 85   | 86   | 87   | 88   | 89   |
|---------------------------|--------|------|------|------|------|------|
| Brass, each .....         | \$1.13 | 1.13 | 1.25 | 1.25 | 1.42 | 1.42 |
| Nickel Plated, each ..... | 1.25   | 1.25 | 1.42 | 1.42 | 1.60 | 1.60 |

## MARSH PATENT AUTOMATIC AIR VALVES.



| Figure...       | 90   | 91   | 92   | 93   | 94   | 95   |
|-----------------|------|------|------|------|------|------|
| Brass, each...  | 1.25 | 1.25 | 1.12 | 1.25 | 1.25 | 1 35 |
| Plated, each... | 1.40 | 1.40 | 1.25 | 1.40 | 1.40 | 1.50 |

### INSTRUCTIONS FOR ADJUSTING.

As the name implies, it is automatic in its action. They are all adjusted at the factory to allow the escape of air, and close by expansion shutting off the steam. Should any steam escape from them, remove the cap and turn the screw carefully till it is stopped. Do not screw it any tighter.

Should the radiator be cold, because air-bound, it will be generally found that the valves have been tampered with and set too tightly. In such case turn the screw to open the valve sufficient to let the air escape, and yet not so far that the expansion will not close it and prevent the escape of steam.

Should the valve become clogged with sediment from the boiler or piping, a few turns of the valve screw will clean it, and then the screw should be turned so as to adjust the valve to the proper opening.

COMPRESSION AIR VALVES.

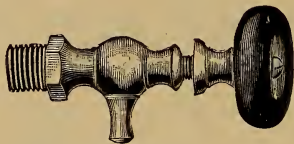


Fig. 96.

| Size, inches.....         | $\frac{1}{8}$ | $\frac{1}{4}$ | $\frac{3}{8}$ |
|---------------------------|---------------|---------------|---------------|
| Finished, each .....      | .65           | .70           | .75           |
| Nickel Plated, each ..... | .70           | .75           | .80           |

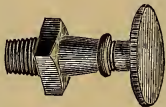


Fig. 97.

| Size, inches.....        | $\frac{1}{8}$ | $\frac{1}{4}$ |
|--------------------------|---------------|---------------|
| Finished, each .....     | .45           | .50           |
| Nickel Plated, each..... | .50           | .55           |

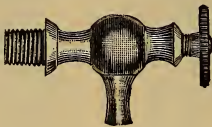


Fig. 98.

| Size, inches.....         | $\frac{1}{8}$ | $\frac{1}{4}$ | $\frac{3}{8}$ |
|---------------------------|---------------|---------------|---------------|
| Finished, each .....      | .50           | .55           | .60           |
| Nickel Plated, each ..... | .55           | .60           | .65           |

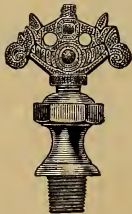


Fig. 99.

| Size, inches.....        | $\frac{1}{8}$ | $\frac{1}{4}$ |
|--------------------------|---------------|---------------|
| Finished, each. ....     | .40           | .50           |
| Nickel Plated, each..... | .45           | .55           |

## AIR COCKS.

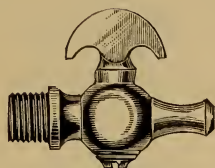


Fig. 100.

|                      |               |               |               |               |
|----------------------|---------------|---------------|---------------|---------------|
| Size .....           | $\frac{1}{8}$ | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ |
| Rough, each.....     | .35           | .40           | .45           | .55           |
| Finished, each ..... | .40           | .45           | .50           | .60           |

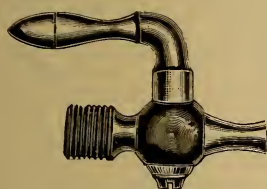


Fig. 101.

|                                |               |               |               |               |
|--------------------------------|---------------|---------------|---------------|---------------|
| Size .....                     | $\frac{1}{8}$ | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ |
| Fig. 101, Finished, each..     | .55           | .60           | .65           | .75           |
| Size .....                     | $\frac{1}{8}$ | $\frac{1}{4}$ |               |               |
| Fig. 102, Finished, each ..... |               | .60           | .70           |               |

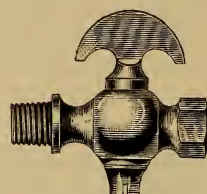


Fig. 102.

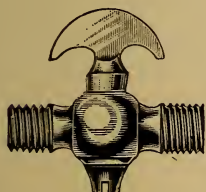


Fig. 103.

|                               |               |               |               |
|-------------------------------|---------------|---------------|---------------|
| Size . . . . .                | $\frac{1}{8}$ | $\frac{1}{4}$ | $\frac{3}{8}$ |
| Fig. 103, Finished, each..    | .45           | .50           | .90           |
| Size .....                    | $\frac{1}{8}$ | $\frac{1}{4}$ | $\frac{3}{8}$ |
| Fig. 104, Finished, each..... | .65           | .70           | .80           |

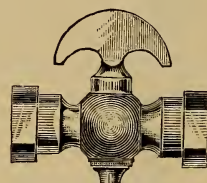


Fig. 104.

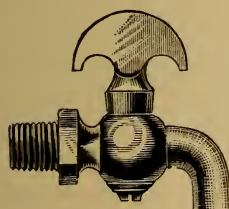


Fig. 105.

|                               |               |               |               |               |
|-------------------------------|---------------|---------------|---------------|---------------|
| Size .....                    | $\frac{1}{8}$ | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ |
| Fig. 105, Finished, each..    | .65           | .70           | 1.00          | 1.10          |
| Size .....                    | $\frac{1}{8}$ | $\frac{1}{4}$ | $\frac{3}{8}$ |               |
| Fig. 106, Finished, each..... | .70           | .90           | 1.25          |               |

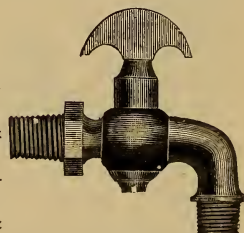


Fig. 106.

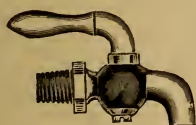


Fig. 107.

|                            |               |               |               |               |
|----------------------------|---------------|---------------|---------------|---------------|
| Size .....                 | $\frac{1}{8}$ | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ |
| Fig. 107, Finished, each.. | .80           | .85           | .90           | 1.00          |
| Size ..                    | $\frac{1}{8}$ | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ |
| Fig. 108, Finished, each.. | .85           | 1.05          | 1.15          | 1.40          |



Fig. 108.



PLAIN OIL CUPS.

With Brass Tubes.



|                                |               |               |               |               |                |                |                |                |               |                |                |                |
|--------------------------------|---------------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|---------------|----------------|----------------|----------------|
| Diameter of Body, inches....   | $\frac{5}{8}$ | $\frac{3}{4}$ | $\frac{7}{8}$ | 1             | $1\frac{1}{8}$ | $1\frac{1}{4}$ | $1\frac{1}{2}$ | $1\frac{3}{4}$ | 2             | $2\frac{1}{4}$ | $2\frac{1}{2}$ | 3              |
| Diameter of Shank, inches. . . | $\frac{3}{8}$ | $\frac{3}{8}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{1}{2}$  | $\frac{1}{2}$  | $\frac{5}{8}$  | $\frac{3}{8}$  | $\frac{3}{8}$ | $\frac{3}{8}$  | $1\frac{1}{8}$ | $1\frac{1}{8}$ |
| Will Chase (Iron Pipe Size)... | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{4}$ | $\frac{1}{4}$  | $\frac{1}{4}$  | $\frac{3}{8}$  | $\frac{1}{2}$  | $\frac{1}{2}$ | $\frac{1}{2}$  | $\frac{3}{4}$  | $\frac{3}{4}$  |
| Fig. 109. Price, each.....     | .25           | .30           | .35           | .40           | .50            | .60            | .90            | 1.25           | 1.75          | 2.25           | 2.75           | 4.50           |

GLASS OIL CUPS.



Fig. 110.

|                                  |               |                |                |                |               |                |                |                |
|----------------------------------|---------------|----------------|----------------|----------------|---------------|----------------|----------------|----------------|
| Diameter of Body, inches.....    | 1             | $1\frac{1}{4}$ | $1\frac{1}{2}$ | $1\frac{3}{4}$ | 2             | $2\frac{1}{4}$ | $2\frac{1}{2}$ | 3              |
| Diameter of Shank, inches.....   | $\frac{3}{8}$ | $\frac{1}{2}$  | $\frac{5}{8}$  | $\frac{3}{4}$  | $\frac{3}{4}$ | $\frac{3}{4}$  | $1\frac{1}{8}$ | $1\frac{1}{8}$ |
| Will Chase (Iron Pipe Size)..... | $\frac{1}{8}$ | $\frac{1}{4}$  | $\frac{3}{8}$  | $\frac{1}{2}$  | $\frac{1}{2}$ | $\frac{1}{2}$  | $\frac{3}{4}$  | $\frac{3}{4}$  |
| Price, each .....                | \$1.00        | 1.50           | 1.75           | 2.00           | 2.25          | 2.50           | 4.00           | 6.00           |
| Extra Glasses, each .....        | .20           | .20            | .25            | .25            | .30           | .40            | .50            | .90            |

OIL CUPS.

With Tee or Lever Handle Cock.



Fig. 111.

|                                     |               |                |                |               |
|-------------------------------------|---------------|----------------|----------------|---------------|
| Diameter of Body, inches.....       | 1             | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2             |
| Diameter of Shank, inches.....      | $\frac{1}{2}$ | $\frac{1}{2}$  | $\frac{5}{8}$  | $\frac{3}{4}$ |
| Will Chase (Iron Pipe Size) .....   | $\frac{1}{4}$ | $\frac{1}{4}$  | $\frac{3}{8}$  | $\frac{1}{2}$ |
| Price, Tee Handle, each... ..       | \$1.00        | 1.50           | 2.00           | 3.00          |
| Price, Lever Handle, each . . . . . | 1.10          | 1.60           | 2.20           | 3.25          |

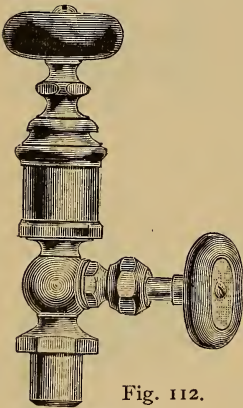


Fig. 112.

LUBRICATORS—WOOD HANDLE.

|                                  |               |                |                |                |               |                |                |                |
|----------------------------------|---------------|----------------|----------------|----------------|---------------|----------------|----------------|----------------|
| Diameter of Body, inches.....    | 1             | $1\frac{1}{4}$ | $1\frac{1}{2}$ | $1\frac{3}{4}$ | 2             | $2\frac{1}{4}$ | $2\frac{1}{2}$ | 3              |
| Diameter of Shank, inches.....   | $\frac{5}{8}$ | $\frac{5}{8}$  | $\frac{3}{4}$  | $\frac{3}{4}$  | $\frac{3}{4}$ | $1\frac{1}{8}$ | $1\frac{1}{8}$ | $1\frac{1}{8}$ |
| Will Chase (Iron Pipe Size)..... | $\frac{3}{8}$ | $\frac{3}{8}$  | $\frac{1}{2}$  | $\frac{1}{2}$  | $\frac{1}{2}$ | $\frac{3}{4}$  | $\frac{3}{4}$  | $\frac{3}{4}$  |
| Price, each .....                | 2.00          | 2.20           | 2.40           | 2.60           | 2.90          | 3.25           | 3.75           | 4.75           |
| Price, with Air Cock, each.....  | 3.00          | 3.20           | 3.40           | 3.60           | 3.90          | 4.25           | 4.75           | 5.75           |

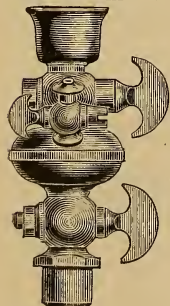


Fig. 113.

OIL GLOBES.

|                                          |                |               |                |                |                |                |
|------------------------------------------|----------------|---------------|----------------|----------------|----------------|----------------|
| Diameter of Globe, inches.....           | $1\frac{1}{2}$ | 2             | $2\frac{1}{4}$ | $2\frac{1}{2}$ | 3              | $3\frac{1}{2}$ |
| Diameter of Shank, inches.....           | $\frac{3}{8}$  | $\frac{3}{8}$ | $\frac{3}{8}$  | $1\frac{1}{8}$ | $1\frac{1}{8}$ | $1\frac{1}{8}$ |
| Will Chase (Iron Pipe Size), inches..... | $\frac{1}{2}$  | $\frac{1}{2}$ | $\frac{1}{2}$  | $\frac{3}{4}$  | $\frac{3}{4}$  | $\frac{3}{4}$  |
| Price, with Cocks, each .....            | 3.00           | 3.75          | 4.50           | 5.50           | 6.50           | 9.00           |
| Price, with Valves, each.....            |                | 4.25          | 4.75           | 5.50           | 6.50           | 9.00           |

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CLOW'S PATENT AUTOMATIC SIGHT FEED LUBRICATOR.

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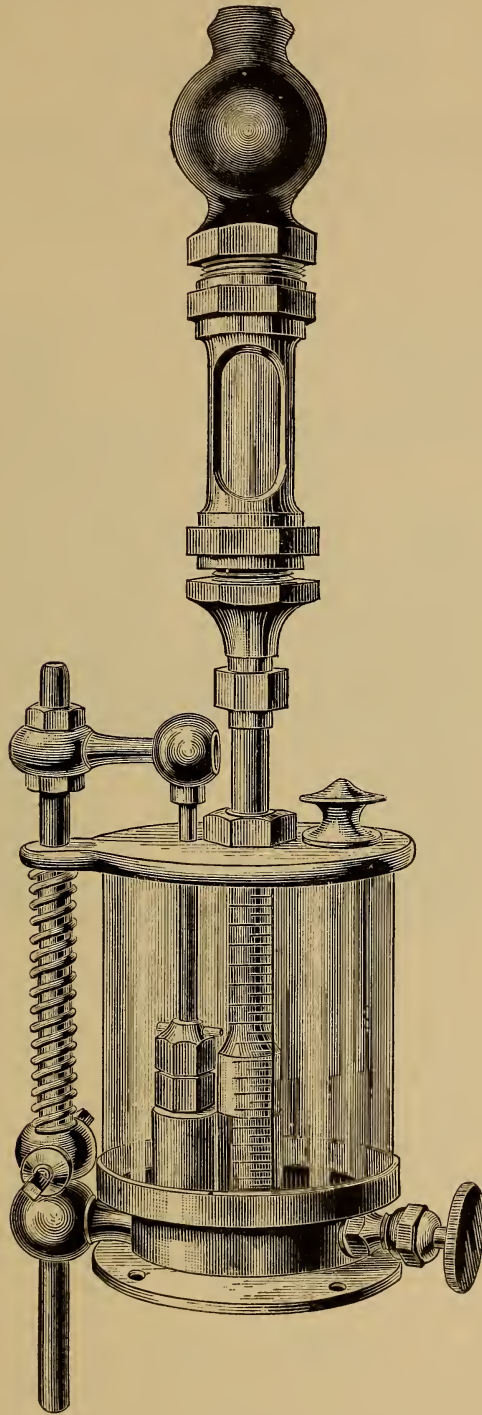


Fig. 114.

This Lubricator will be found reliable under all conditions. Is perfectly automatic and is applicable to all Engines and Locomotives.

See page 46 for full description and prices.

CLOW'S PATENT

Automatic Sight Feed Lubricator.

In presenting the Cylinder Oiler to the Trade, we do not hesitate to say that it is the most perfect Oiler made. We claim for it easy application to any style of engine. It is positive in its work, and will effect a saving of 50 to 75 per cent. in oil. It will force the oil in regular quantities at regular intervals into the valve and cylinder; it is a well-known fact that all engineers are required to use oil in abundance in the cylinder where no device of this kind is used. The cup can be placed anywhere on the engine, but we would recommend somewhere near the cross head, or some rock shaft, where it can be easily tapped. The operating rod should not be raised more than  $\frac{1}{4}$  of an inch; the spring on the operating rod should only be kept tight enough to force the plunger down; where the sight feed is used this would be necessary in order to show a round drop of oil. If the spring is too tight it will break the drop into small particles. Should the glass at any time become full of oil, put a little water in the cup, and it will be forced through the sight feed glass.

The cups are of the very best brass metal, and the outer surface is nicely finished before it is nickel-plated. All we ask is a fair trial, knowing that it is the best cup in the world.

ITS ADVANTAGES ARE:

- NO VALVES TO PACK.
- NO CONDENSATION OF STEAM.
- POSITIVE FEED.
- NO PRESSURE IN THE OIL CHAMBER.
- EASY ATTACHMENT.
- NO PART TO GET OUT OF ORDER.
- EASILY REGULATED TO FEED ANY QUANTITY OF OIL.
- CAN BE FILLED WHILE IN OPERATION.
- CANNOT BE AFFECTED BY COLD WEATHER.

PRICE LIST.

|                 |         |                     |         |
|-----------------|---------|---------------------|---------|
| Half Pint ..... | \$20.00 | Nickel Plated ..... | \$23.00 |
| One " .....     | 25.00   | " " .....           | 30.00   |
| One Quart ..... | 30.00   | " " .....           | 36.00   |

## CLOW'S PATENT

## Automatic Wrist Pin Oil Cup.

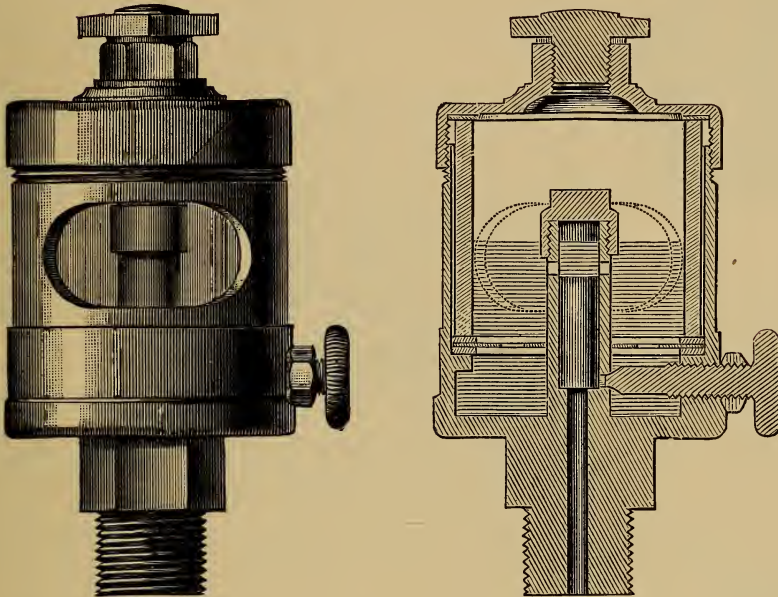


Fig. 115.

| Number .....                    | 1    | 2    | 3    |
|---------------------------------|------|------|------|
| Price, each .....               | 3.00 | 4.00 | 5.00 |
| Price, Nickel Plated, each..... | 4.00 | 5.00 | 6.00 |

This cup is designed for Oiling Crank Pins and Eccentrics, and is provided with a Cylindrical Gravitating Valve which works freely up and down with every revolution of the Engine. It is easily adjusted to feed the requisite amount of Oil, and is perfectly automatic and reliable in its action. It will also be found more economical in the consumption of Oil than any Cup made.



## THE DETROIT

(PARSHALL'S)

## Continuous Feed Lubricating Oil Cups.

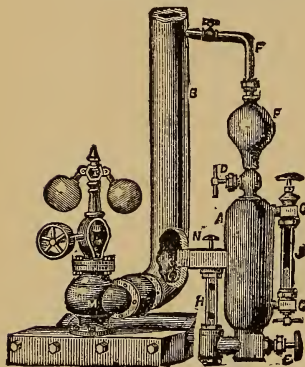


Fig. 116.

A—Oil Reservoir.  
 B—Steam Pipe.  
 C—Oil Filler.  
 D—Water Feed Valve.  
 E—Valve to regulate flow of Oil.  
 F—Steam Tube and Condensing Chamber.  
 G—Valve to draw off water, to prevent freezing, etc.  
 H—Visible Feed Water Chamber.  
 J—Glass Indicator.  
 K—Oil Discharge Pipe.  
 M—Governor Valve.  
 N—Valve to correct pulsation or unsteadiness in feed.

| SIZE.            | Plain Brass. | Nickel Plated. | Suitable for Engine with Diameter of Cylinder as follows: |
|------------------|--------------|----------------|-----------------------------------------------------------|
| Half Pint.....   | \$22.00      | \$25.00        | Up to 10 inches.                                          |
| Pint.....        | 30.00        | 35.00          | 10 to 18 inches.                                          |
| Quart.....       | 45.00        | 50.00          | 18 to 30 inches.                                          |
| Half Gallon..... | 60.00        | 65.00          | 30 and over.                                              |

The principle of applying lubricants, through the means of these Cups is to introduce the oil continuously, drop by drop into the column of steam, where it is *vaporized*, thus becoming a steam lubricant, which is carried to every part of the valves and cylinder, lubricating all alike.

In applying oils by the ordinary methods, it is well known that the part of the cylinder first reached receives *too much*, and the oil is wasted, being carried out by the first escape of steam, while other parts suffer from lack of proper lubrication. By the use of these Cups this difficulty is entirely overcome.

## THEIR ADVANTAGES OVER ALL OTHERS

Are: (1) They secure a perfect and uniform lubrication of every part. (2) Continuous and uniform feeding, fast or slow, the flow being regulated at will, and constantly in view. (3) Economy. The oil is distributed evenly over all the surface reached by the steam, securing perfect lubrication, *with a saving of from 50 to 90 per cent.* over ordinary methods

of applying, and thus preventing friction and wearing of machinery. (4) They contain a glass indicator tube, which shows at all times the quantity of oil in the Lubricator, and a sight feed glass, which shows how fast the oil is being used, drop by drop, passing in sight to the parts to be lubricated. (5) Simplicity of construction. The body of the cup being cast in one piece, it is not liable to leak or get out of order. (6) The cups are adapted to the use of and will feed any clean oil, black or white, light or heavy, and they are so constructed as to entirely overcome effects of pulsation. (7) Should it become necessary, the Cup may be cleansed by simply opening the valves, by which steam can be forced through every part, cleaning the Cup without disconnecting it, or stopping the engine. These Cups are also warranted to be the best in use for oiling Locomotives, Air-Brakes and Steam Pumps.

## DIRECTIONS.

**HOW TO APPLY THE CUP.**—First, drill and tap the steam pipe above the throttle, with  $\frac{1}{2}$  or  $\frac{3}{4}$  inch gas tap, as may be required, to receive the oil discharge pipe. Then tap the steam pipe three feet or more above the top of the condensing chamber, as may be required, using  $\frac{1}{4}$  inch gas pipe for steam connecting tube, which attach to top of condenser, placing globe valve between steam pipe and condensing pipe. If, for any reason, steam pipe can not be tapped three or more feet above condensing chamber, it may be tapped lower down and the tube of required length may be coiled.

**HOW TO FILL AND OPERATE THE CUP.**—Close valves D and E; open valve G, draw off the water; close valve G, and fill with oil. First, open valve D, then regulate flow of oil with valve E. In case of strong pulsation, check valve N to be partially closed until oil feeds steadily; same to be closed in case of breaking of feed glass. Before starting the Cup, time should be allowed for sight feed glass and condensing chamber to fill with water by condensation. When there is danger of freezing, when not in use, valves D and G, and valve at bottom of feed glass should be left open.

In special cases, when Cup can not be attached as shown in cut, send us a diagram, and we will give directions. When applied and operated according to instructions, we guarantee perfect satisfaction, as they never fail.

These Cups are protected by fourteen distinct patents in the United States and foreign countries, and patents have been applied for to cover late improvements.

To responsible parties, we will send a Cup on twenty days' trial. At the end of that time, if not found satisfactory, it may be returned at our expense.



Fig. 117

OIL PUMPS.

|               |       |
|---------------|-------|
| Fig. 117....  | 10.00 |
| Fig. 118..... | 12.00 |

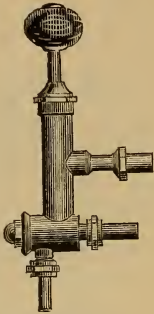


Fig. 118.

LEVER HANDLE OIL PUMPS.

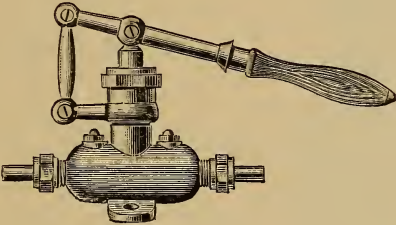
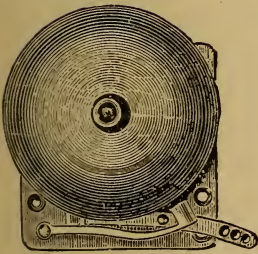


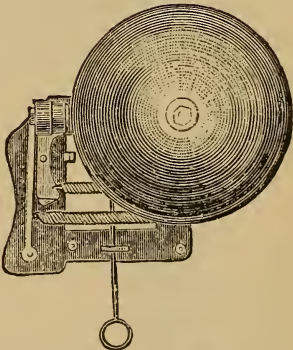
Fig. 119.

No. 1, each. . . . . \$14.00 | No. 2, each..... \$16.00



Trip. Fig. 120.

GONG BELLS.



Locomotive. Fig. 121.


|                            |      |      |      |      |      |      |       |       |
|----------------------------|------|------|------|------|------|------|-------|-------|
| Diameter, inches.....      | 4    | 5    | 6    | 7    | 8    | 10   | 12    | 13    |
| Fig. 120, price each.....  | 2.75 | 3.25 | 3.90 | 5.00 | 6.00 | 8.00 | 14.00 | 20.00 |
| Fig. 121, price each. .... | 3.15 | 3.65 | 4.30 | 5.75 | 6.75 | 9.00 | 15.00 | 21.00 |

# STEAM GAUGES.



Fig. 122.

|                |                      |         |
|----------------|----------------------|---------|
| Brass Case, 12 | inch Dial, each..... | \$75.00 |
| " " 10         | " " " ".....         | 38.00   |
| Iron " 10      | " " " ".....         | 28.00   |
| Brass " 8 1/2  | " " " ".....         | 28.00   |
| Iron " 8 1/2   | " " " ".....         | 20.00   |
| Brass " 6 3/4  | " " " ".....         | 20.00   |
| Iron " 6 3/4   | " " " ".....         | 16.00   |
| Brass " 6      | " " " ".....         | 17.00   |
| " " 5 1/2      | " " " ".....         | 14.00   |
| Iron " 6       | " " " ".....         | 14.00   |
| " " 5          | " " " ".....         | 6.00    |
| Brass " 4 1/2  | " " " ".....         | 12.00   |
| Iron " 4 1/2   | " " " ".....         | 10.00   |
| Brass " 3 1/2  | " " " ".....         | 10.00   |
| Iron " 3 1/2   | " " " ".....         | 9.00    |
| Brass " 2 1/2  | " " " ".....         | 10.00   |

Octagon Rings for No. 1 to No. 3, \$2.50 extra, *net*. Nickel Plating charged at cost.  
 All Gauges graduated from open Mercury Column.

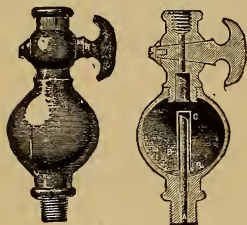


Fig. 123.

## PRINDLE'S PAT. SYPHON COCK.

Price, each .....\$1.00



Fig. 124.

## SYPHON FOR STEAM GAUGE.

|                                  |        |
|----------------------------------|--------|
| Size for Iron Pipe, inches ..... | 1/4    |
| Price, each .....                | \$0.50 |

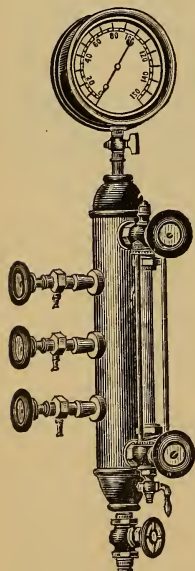


Fig. 125.

- No. 1. Combination, Complete .....\$20.00  
 With trimmings as follows:  
 3 Comp. Gauge Cocks for 3/8 Pipe.  
 1 Fig. 70 Water Gauge.  
 1 5-inch Dial Iron Case Steam Gauge.  
 1 1/2 Nipple, Globe Valve and Syphon,  
 For 1/2-inch Steam Connections.
- No. 2. Combination, Complete .....\$35.00  
 With trimmings as follows:  
 3 Comp. Gauge Cocks for 1/2 Pipe.  
 1 Fig. 70 Water Gauge.  
 1 5-inch Dial Iron Case Steam Gauge.  
 1 1/2 Nipple, Globe Valve and Syphon,  
 For 3/4-inch Steam Connections.
- No. 3. Combination, Complete .....\$50.00  
 With trimmings as follows:  
 3 Comp. Gauge Cocks for 3/4 Pipe.  
 1 Fig. 72 Water Gauge.  
 1 6-inch Iron Case Steam Gauge.  
 1 1 Nipple, Globe Valve and Syphon,  
 For 1 inch Steam Connections.

If trimmings are wanted differing from those specified, please state that fact, and we will furnish to order.

| BODIES ONLY.      |      |      |      |
|-------------------|------|------|------|
| Number ..         | 1    | 2    | 3    |
| Price, each ..... | 3.50 | 5.00 | 7.50 |



## CROSBY ADJUSTABLE POP SAFETY VALVES.

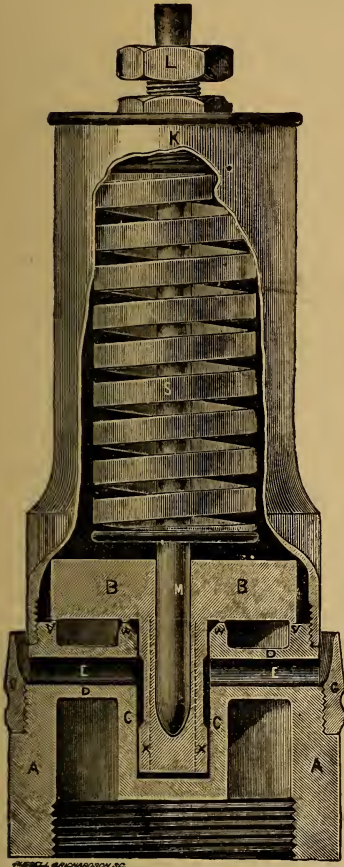


Fig. 126.

## FOR LOCOMOTIVES.

WE MAKE THE FOLLOWING CLAIMS FOR THIS SAFETY VALVE:—

- First.* Opens precisely at fixed working pressure.
- Second.* Discharges all excess of steam above fixed working pressure.
- Third.* Reduces the pressure rapidly upon opening.
- Fourth.* Closes with least possible loss of steam.
- Fifth.* The limits of pressure within which the valve will open and close are adjustable.
- Sixth.* Uniform in action at different pressures.
- Seventh.* Simple in arrangement, and easily connected and adjusted.
- Eighth.* Does not deteriorate under continued use.
- Ninth.* Never sticks on seat.
- Tenth.* Makes comparatively little noise in discharging.
- Eleventh.* Occupies less room than any safety valve.

These valves are made to correspond with the requirements, and are used on locomotive, portable, steamboat, stationary and steam fire engine boilers, and for other purposes.

|       |                                                          |         |
|-------|----------------------------------------------------------|---------|
| 1     | inch diameter, all Composition, Locomotive and Portable. | \$12.00 |
| 1 1/4 | " " " " " "                                              | 15.00   |
| 1 1/2 | " " " " " "                                              | 20.00   |
| 2     | " " " " " "                                              | 30.00   |
| 2 1/4 | " " " " " "                                              | 40.00   |
| 2 1/2 | " " " " " "                                              | 50.00   |
| 3     | " " " " " "                                              | 65.00   |
| 3 1/2 | " " " " " "                                              | 80.00   |
| 4     | " " " " " "                                              | 100.00  |

Always state the pressure at which valve shall open, and if for marine or stationary boilers.

Every valve is tested and adjusted before shipping.

Lock-up attachment furnished when required.



Fig. 127.

## FOR PORTABLES, ETC.



# The Ashton Lock-up "Pop" Safety Valve.

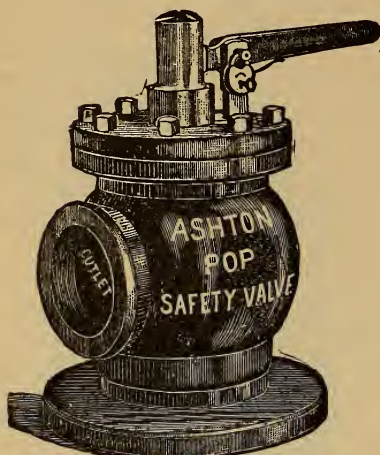


Fig. 128.  
For Stationary Boilers.

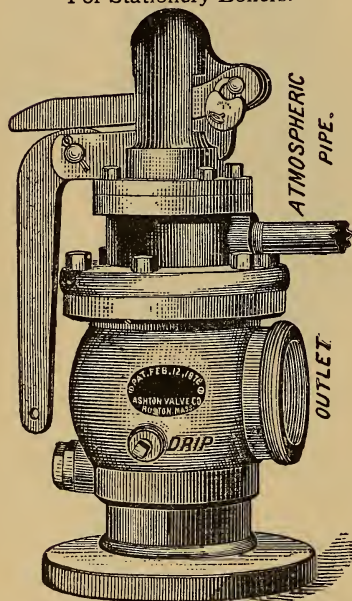


Fig. 130.

Government Valve for Marine Use.

Automatic. \_\_\_\_\_  
Non-corrosive. \_\_\_\_\_  
Cannot be tampered with. \_\_\_\_\_  
Durable in quality. \_\_\_\_\_  
Accurate in operation. \_\_\_\_\_

Adopted by United States Board of  
Supervising Inspectors of Steam Vessels.

Five Highest Premiums. Both Gold  
and Silver Medals.

2,800 Boiler Explosions since 1867,  
caused by imperfectly constructed  
Safety Valves.

Positively prevents dangerous over-pressure.

Patents cover fully and clearly their Lock-up "Pop" Valves,  
and they guarantee protection to our customers in their use.

The metal used in their Valves is acknowledged the best  
and only Non-corrosive known.

They are in successful operation on  
one hundred and fifty Railroads. In  
use in every state and territory.

These Valves are what their name  
implies, "SAFETY VALVES," and not  
cheap devices. And no case or record  
of a boiler explosion where the Ashton  
"Pop" Safety Valve was applied.

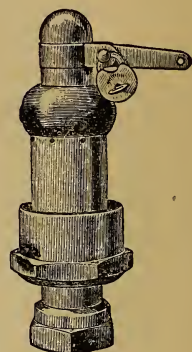


Fig. 129.

For Portable Engine  
Boilers.

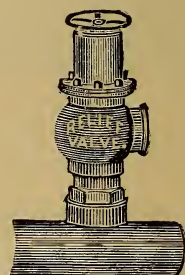


Fig. 131.

Water Relief Valve.

| Size, inches. ....                                       | $\frac{3}{4}$ | 1    | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2     | $2\frac{1}{2}$ | 3     | $3\frac{1}{2}$ | 4     | 5      | 6      |
|----------------------------------------------------------|---------------|------|----------------|----------------|-------|----------------|-------|----------------|-------|--------|--------|
| For Boilers having following sq. ft. grate surface. .... | 1.32          | 2.35 | 3.68           | 5.30           | 9.42  | 14.72          | 21.20 | 28.86          | 37.69 | 58.90  | 84.82  |
| Fig. 129.—Brass Valve, Price. ....                       | 6.00          | 8.00 | 10.00          | 12.00          | 25.00 | ...            | ...   | ...            | ...   | ...    | ...    |
| " 128.—Iron Valve Pipe Outlet. ....                      | ...           | ...  | 12.00          | 18.00          | 30.00 | 40.00          | 55.00 | 60.00          | 70.00 | 85.00  | 125.00 |
| " 130.—Brass Valve. ....                                 | 7.20          | 9.60 | 12.00          | 14.40          | 30.00 | ...            | ...   | ...            | ...   | ...    | ...    |
| " 130.—Iron Valve Pipe Outlet. ....                      | ...           | ...  | ...            | ...            | 38.00 | 48.00          | 66.00 | 75.00          | 84.00 | 102.00 | 150.00 |
| " 131.—Water Relief Valves. ....                         | ...           | ...  | ...            | 30.00          | 40.00 | 60.00          | 75.00 | ...            | 85.00 | 125.00 | 150.00 |
| Diameter of Flange, inches. ....                         | ...           | ...  | ...            | ...            | ...   | 8              | 9     | 9              | 10    | 12     | 14     |

For marine use, always give number of square feet of grate surface. Government rule, one square inch valve area to three square feet of grate surface.

Always order by No. of valve; state pressure required, and whether flanged or screw end.

When raising steam first time after applying Safety Valve raise the valve from its seat by the lever and let steam blow freely to clear the seat from chips that may have settled in the connections.

# HALL INJECTORS.

## "O." CLASS.

(Non-lifting.) 2 lbs. to 200 lbs.

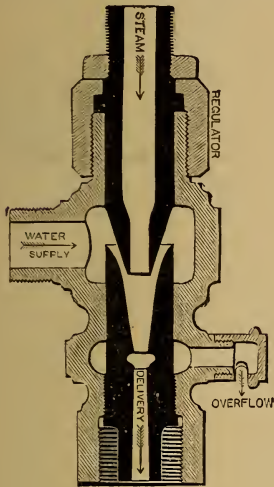


Fig. 132.

## "D.L." CLASS.

(Lifting and forcing.) 20 lbs. to 150 lbs.

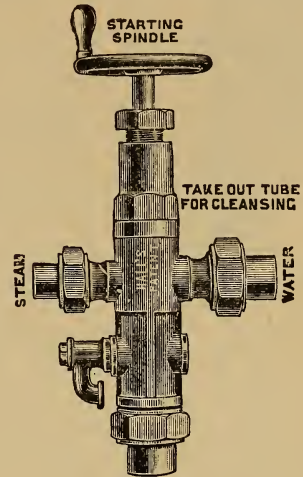


Fig. 133.

| Standard Sizes in Millimeters. ....No.                      | 1             | 2             | 3             | 4             | 5             | 6             |
|-------------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Gallons per hour at 60 lbs. pressure.....                   | 90            | 120           | 220           | 350           | 450           | 650           |
| Size recommended H. P. Nominal.....                         | 5             | 10            | 20            | 40            | 50            | 60            |
| Water and Delivery Pipes, Sizes, inch.....                  | $\frac{1}{2}$ | $\frac{1}{2}$ | $\frac{3}{4}$ | $\frac{3}{4}$ | 1             | 1             |
| Steam Pipes, Sizes, inch.....                               | $\frac{1}{2}$ | $\frac{1}{2}$ | $\frac{1}{2}$ | $\frac{1}{2}$ | $\frac{3}{4}$ | $\frac{3}{4}$ |
| Fig. 132. O. Class (Non-Lifting) all Gun Metal, each....    | \$15.00       | 17.00         | 20.00         | 25.00         | 35.00         | 45.00         |
| Fig. 133. D.L. Class(Lifting & Forcing) all Gun Metal, each | \$18.00       | 20.00         | 25.00         | 30.00         | 40.00         | 50.00         |

| Standard Sizes in Millimeters. ....No.                      | 7              | 8              | 9              | 10             | 11             | 12             |
|-------------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Gallons per hour at 60 lbs. pressure.....                   | 850            | 1,230          | 1,800          | 2,300          | 2,800          | 3,200          |
| Size recommended H. P. Nominal.....                         | 70             | 80             | 100            | 150            | 200            | 300            |
| Water and Delivery Pipes, Sizes, inch.....                  | $1\frac{1}{4}$ | $1\frac{1}{4}$ | $1\frac{1}{2}$ | $1\frac{1}{2}$ | 2              | 2              |
| Steam Pipes, Sizes, inch.....                               | 1              | 1              | $1\frac{1}{4}$ | $1\frac{1}{4}$ | $1\frac{1}{2}$ | $1\frac{1}{2}$ |
| Fig. 132. O. Class (Non-Lifting) all Gun Metal, each....    | \$55.00        | 65.00          | 75.00          | 90.00          | 100.00         | 120.00         |
| Fig. 133. D.L. Class(Lifting & Forcing) all Gun Metal, each | \$60.00        | 70.00          | 80.00          | 95.00          | 120.00         | 135.00         |

Nos. 1, 2 and 3, D.L. Class are made without unions.

**LARGER SIZES TO ORDER UP TO 20,000 GALLONS PER HOUR.**

Every injector is thoroughly tested before leaving our works, and may be depended upon when received.

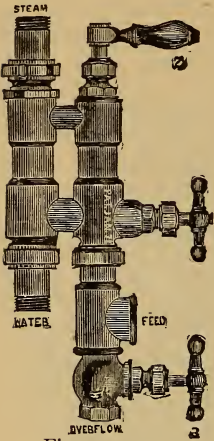


Fig. 134.

THE  
Hancock Inspirator.

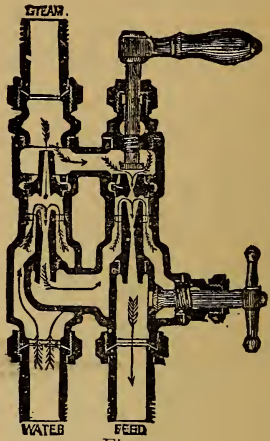


Fig. 135.

| No. | No. of Inspirator. | Size of Connections. |        | Gallons per hour.<br>60 lbs. Pressure. | Price.  |
|-----|--------------------|----------------------|--------|----------------------------------------|---------|
|     |                    | Suction and Feed.    | Steam. |                                        |         |
| 7½  | .....              | ¾                    | ¾      | 60                                     | \$16.00 |
| 8¾  | .....              | 1½                   | ¾      | 85                                     | 18.00   |
| 10  | .....              | 1½                   | ¾      | 120                                    | 20.00   |
| 12½ | .....              | ¾                    | 1½     | 220                                    | 25.00   |
| 15  | .....              | ¾                    | 1½     | 300                                    | 30.00   |
| 17½ | .....              | 1                    | ¾      | 360                                    | 40.00   |
| 20  | .....              | 1                    | ¾      | 540                                    | 45.00   |
| 22½ | .....              | 1¼                   | 1      | 700                                    | 55.00   |
| 25  | .....              | 1¼                   | 1      | 900                                    | 60.00   |
| 30  | .....              | 1½                   | 1¼     | 1260                                   | 75.00   |
| 35  | .....              | 1½                   | 1¼     | 1740                                   | 90.00   |
| 40  | .....              | 2                    | 1½     | 2230                                   | 110.00  |
| 45  | .....              | 2                    | 1½     | 2820                                   | 125.00  |
| 50  | .....              | 2½                   | 2      | 3480                                   | 150.00  |

When Ordering an Inspirator Please Answer the Following Questions:

1. What is the horse-power of boiler or boilers; what is the quantity of water required per hour?

2. What is the range of steam pressure?

3. What is the temperature of supply?

4. What is the extreme lift or head, vertically or horizontally from supply to Inspirator.
5. Is water used for other purposes than feeding boilers?

6. What is the number of boilers?

7. What type of boiler is used?

8. What are the dimensions of boiler?

GENERAL DIRECTIONS FOR CONNECTING AND OPERATING INSPIRATORS.

Connect the Inspirator, as shown in the different cuts, taking steam in all cases from the *highest point of boiler*. Place a *Globe* valve in steam pipe, just above the inspirator; a *Globe* valve in the supply pipe, close to the Inspirator, and a *Check* and *Globe* valve between Inspirator and boiler. If the feed is delivered through a heater, place a *Check* between it and the Inspirator.

*Blow out steam pipe before connecting.* For a high lift, or long draft, make the suction one size larger than the connection. *Be sure that the suction pipe is absolutely tight. The conditions must be:*

(1st.) An Air-Tight Suction. (2d.) An abundant supply of Water, with a lift not exceeding 25 feet, and a temperature not exceeding 140 degrees Fahr., for a low lift, and 110 degrees for a 25 feet lift.

Do not connect with other steam pipes.

Tap the boiler where you can obtain the *Dryest Steam*, and if you are obliged to connect with a large steam pipe, *tap it on the upper side* so as to avoid the drip caused by condensation in the large pipe.

STEAM PRESSURE REQUIRED.

- For a lift of 5 feet 15 lbs.

For a lift of 10 to 15 feet, 20 lbs.
- For a lift of 15 to 20 feet, 25 lbs.

For a lift of 20 to 25 feet, 20 to 45 lbs.

To start the inspirator see that the overflow valves marked 1 and 3, are open, and the force valve, marked 2, is closed. Give full steam. After getting the water, close No. 1; open No. 2 one-quarter of a turn; Close No. 3, and the inspirator is at work.

In supplying the Inspirator from a head, turn on the water first and steam next.

*No adjustment is necessary for varying steam pressure;* but the quantity of water delivered can be varied by increasing or reducing the steam or water supply. In all cases when the Inspirator is not at work, open both overflow valves, 1 and 3; this allows all water to escape, and leaves the inspirator in position for starting.

Do not allow boiler purger or composition of any kind to pass through the Inspirator.

In case the inspirator becomes incrustated with lime, disconnect it and place it in a bath composed of one part of muriatic acid and twelve parts of soft water. Leave the inspirator in the bath over night.



## STEAM JET PUMP.

Which is Designed for Supplying Water Tanks at Mills  
or Factories.

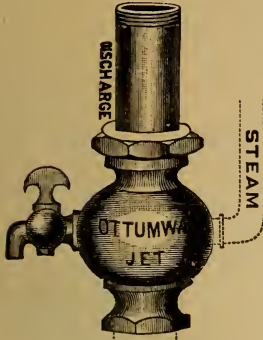


Fig. 136.

FOR PUMPING WATER OR OTHER LIQUIDS, AT MINES, DISTILLERIES, BREWERIES, ETC., AND TO TAKE THE PLACE OF MORE EXPENSIVE PUMPS WHOSE COMPLICATED PARTS RENDER THEM THE MORE LIABLE TO BREAKAGE.

Please notice the following points of superiority over the ordinary Cold Water Pump, where, as in most locations, it is necessary to raise water only to moderate heights or to fill Tanks for the feeding of Boilers :

Drawing steam direct from the boiler; they may be operated regardless of all other machinery and can be placed in a cistern, well, or near any water supply at any distance, either long or short from the boiler. The standard size will make 14 feet suction and will raise water from 15 to 60 feet in height. The pressure of steam required is about one pound per square inch for each foot the water is to be raised. Our Pumps are made, in all their parts, of standard sizes and are uniform in their operation. As they have no moving parts they require no packing and CAN NOT GET OUT OF ORDER.

### Directions for Purchasing and Putting up Steam Jet Pump.

- 1st. The size of the Pump is determined by the internal diameter of the Suction Pipe.
- 2nd. In no case should a smaller Pipe be used than indicated in the table below, and where the Pump is placed a long distance from the Boiler, the Steam Pipe should be one or two sizes larger and should be protected by some kind of packing.
- 3rd. In ordering Pumps give distance of water from Tank; from the Boiler to where you desire to place the pump; height to which water is to be raised and pressure of steam used.
- 4th. Place the Pump at a point as near the water as possible, and not over 14 feet perpendicularly from the water to be raised. Put a Stop Cock in the Steam Pipe at a convenient point for starting and stopping the Pump.
- 5th. Connect the Steam, Discharge and Suction Pipe, as shown in the above cut, and place the Discharge Pipe so that the water will all run out, when the steam is shut off. It will be necessary to fit a Strainer on the end of Suction Pipe, using care that the supply of water is not reduced too much thereby.

### DIRECTIONS FOR OPERATING.

- 1st. Turn on the Steam slowly until the Suction is formed, which will be indicated by a peculiar noise in the Pump; then turn on Steam enough to drive the water to point of discharge.
- 2nd. In case the Pump fails to start, one of the following three causes must be remedied: 1st. Leaks in the Suction Pipe. 2nd. Obstructions in the Suction Pipe or in the Pump. 3rd. Too high suction. Not over 25 lbs. of steam need be used to form the suction, and higher steam must be carried according to the height of the discharge at about the rate of one pound per foot.

### PRICE LIST.

| Size of Pump.  | Suction Pipe.  | Discharge Pipe. | Steam Pipe.   | Capacity.<br>Gallons per Minute. | Price. Brass Jets.     |
|----------------|----------------|-----------------|---------------|----------------------------------|------------------------|
| $\frac{3}{4}$  | $\frac{3}{4}$  | $\frac{3}{4}$   | $\frac{3}{8}$ | 8 to 10                          | 8.00                   |
| 1              | 1              | 1               | $\frac{1}{2}$ | 12 to 15                         | 10.00                  |
| $1\frac{1}{4}$ | $1\frac{1}{4}$ | $1\frac{1}{4}$  | $\frac{1}{2}$ | 15 to 20                         | 12.00                  |
| $1\frac{1}{2}$ | $1\frac{1}{2}$ | $1\frac{1}{2}$  | $\frac{3}{4}$ | 25 to 30                         | 15.00                  |
| 2              | 2              | 2               | $\frac{3}{4}$ | 30 to 40                         | 18.00 Iron B. Mounted. |

These Pumps will operate with best results where there is a plentiful supply of water. It is sometimes noticed that after running for a time they will suddenly "let go," and have to be started again. This may be due to a scarcity of water, a leak in the Suction Pipe, which, becoming exposed by the lowering of the water, lets the air into the Pump, or a PEBBLE IN THE PUMP; this last is often quite annoying, as for instance: a pebble which is too large to pass through the water nozzle in the Pump, will act as a "bob," and will, by advancing and receding, partially shut off the discharge and finally becoming fast, will stop the Pump. When the steam is shut off, the water in the discharge pipe running back, will dislodge the pebble and force it back into the Suction Pipe, where it will remain and cause the same annoyance indefinitely, until it is removed or passes through. A strainer placed on Suction Pipe will obviate that difficulty and save much annoyance.

These Pumps are not for feeding Boilers (which only can be done by a Force Pump) They are made entirely of Brass, which prevents them from rusting or corroding when other liquids than water are used.

Every Pump is fully warranted. In case any are imperfect we will bear all expense of express, in making the exchange for another one, or will refund the money if preferred.



## THE MISSISSIPPI SYPHON OR JET PUMP.

NO CLOGGING. CANNOT CHOKE UP.

The only Syphon that has a clear full opening through Pump, the same size and on a line with openings through suction and discharge pipe. Will pump with water 25 per cent. of Coal, Sawdust, Sand or other gritty substances and not choke up or get out of repair.

When used for Vessels, Barges, Excavations, Quarries and other places holding muddy or gritty water, this Syphon will give better satisfaction than any other Pump or Syphon now in the market.

PATENTED 1885.

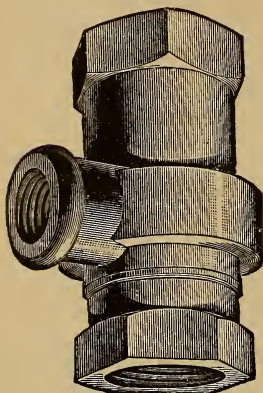


Fig. 137.

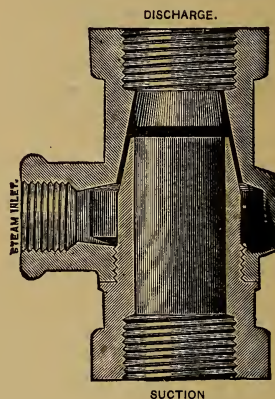


Fig. 138

### DESCRIPTION.

These pumps are operated by the use of steam for raising water from Wells, Cisterns, Dams, Rivers, Holds of Vessels, Mines, Quarries, Excavations, etc., and are also adapted for raising water into tanks for Railway Stations, Irrigating purposes, etc. They will raise muddy, sandy or gritty water as readily as clean, and as the opening through pump is the same size as opening through suction or discharge pipe, it cannot clog or choke up. The construction of this pump is simple and the principle of working even more so, the steam enters the pump as shown in cut and creates a vacuum or suction and so long as steam continues to enter, so long will the suction and discharge continue. The particular advantage that we claim over all other pumps made for similar purposes, is that anything that enters suction pipe will pass through pump and discharge pipe without interruption or clogging; and also that capacity of pumping is greater than that of any other pump of similar size openings. To attain the best results turn on steam very lightly at first, simply to warm the pipes, then turn on full pressure for a few moments to create a strong vacuum and reduce this pressure gradually until results are satisfactory.

As a Bilge Pump these Pumps have no equal, as they are specially designed for raising the largest amount of water in the least possible time, and with but little steam. And as gritty or solid substances can not effect the working of these Pumps in the least, they are especially adapted for Vessels of all kinds, Tanneries, etc.

As a Force Pump, the nearer they are placed to the water the better will be the results.

This Pump has no valves or wearing parts of any kind, it will not wear out in a life-time. It is noiseless, cheap and perfect; every pump is tested at factory.

### PRICE LIST, WITH DIMENSIONS AND CAPACITY.

| No. of Pump. | Suction and Discharge. | Steam Pipe.         | Capacity per minute. | Price, Brass. | Price, Iron. |
|--------------|------------------------|---------------------|----------------------|---------------|--------------|
| 2            | $\frac{3}{4}$ inch.    | $\frac{3}{8}$ inch. | 12 galls.            | \$ 8.00       |              |
| 3            | 1 "                    | $\frac{1}{2}$ "     | 20 "                 | 10.00         |              |
| 4            | $1\frac{1}{4}$ "       | $\frac{1}{2}$ "     | 30 "                 | 12.00         |              |
| 5            | $1\frac{1}{2}$ "       | $\frac{3}{4}$ "     | 50 "                 | 15.00         | \$ 14.00     |
| 6            | 2 "                    | $\frac{3}{4}$ "     | 100 "                | 18.00         | 16.00        |
| 7            | $2\frac{1}{2}$ "       | 1 "                 | 150 "                | 24.00         | 20.00        |
| 8            | 3 "                    | 1 "                 | 225 "                | 30.00         | 24.00        |
| 9            | 4 "                    | $1\frac{1}{2}$ "    | 335 "                | 52.00         | 40.00        |
| 10           | 6 "                    | 2 "                 | 535 "                | 96.00         | 80.00        |

## EUREKA LOW PRESSURE STEAM HEATING APPARATUS.

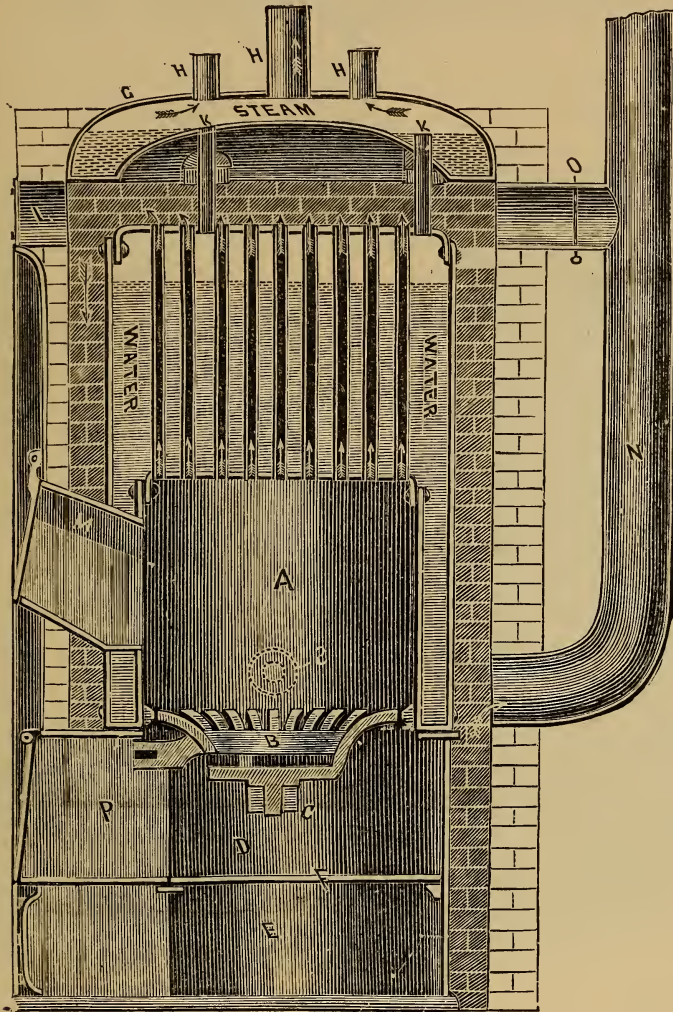


Fig. 139.

SECTIONAL VIEW OF LOW PRESSURE STEAM GENERATOR, FRONT TO REAR.

## EXPLANATION.

(A) Fire-box. (B) Fire-grate; a shake and dump grate, perfectly cleaned of waste quickly, without losing the fire. (C) Grate bar supporting fire grate. (D) Space between fire and ash grates. (E) Ash pit beneath ash grate. (F) Ash grate in two parts. (G) Steam dome connected to top of boiler proper, with three nipples *h h*, which extend to height of concave surface, holding water to that height, thus preventing the possibility of superheating. By this arrangement water is carried much higher in the boiler proper than is practical with ordinary vertical boilers, and greater length of life is given it. (H) (H) (H) Steam feed pipes. (L) Cleaner box, through which tubes are cleaned with steam, and more quickly than most other boilers. (M) Feed mouth for fuel. (N) Smoke flue with direct and indirect connections. (O) Damper set in direct flue. (S) Diagram of open flange on outside, to which return drip pipes are connected. (T) Apex of an inverted V, closing at a point just below where the diameter of smoke flue would come below bottom edge of dome. The extremes of the  $\Delta$  extend down and around the sides of boiler, terminating just above the flanges S. The work entire is set on a cast iron base plate (seen at bottom). In setting the brick work a space three inches in the clear is left around the boiler proper and circular part of base, except the  $\Delta$ , which is made by crowding bricks in on end against the boiler.

The  $\Delta$  constructed as described, in combination with damper O, when closed compels the products of combustion, when passed through the tubes, to turn over and down that part the shell in front of the  $\Delta$ , when, on reaching its extremes at S, they pass to the rear and out through the indirect base flue of smoke pipe N. This is the usual operation, and by it the fire surfaces are largely increased, and with the more thorough application of heat there is much less fuel required to make the same steam than with most boilers. The damper in direct flue may be opened for any needed convenience.



## Eureka Low Pressure Steam Heating Apparatus.

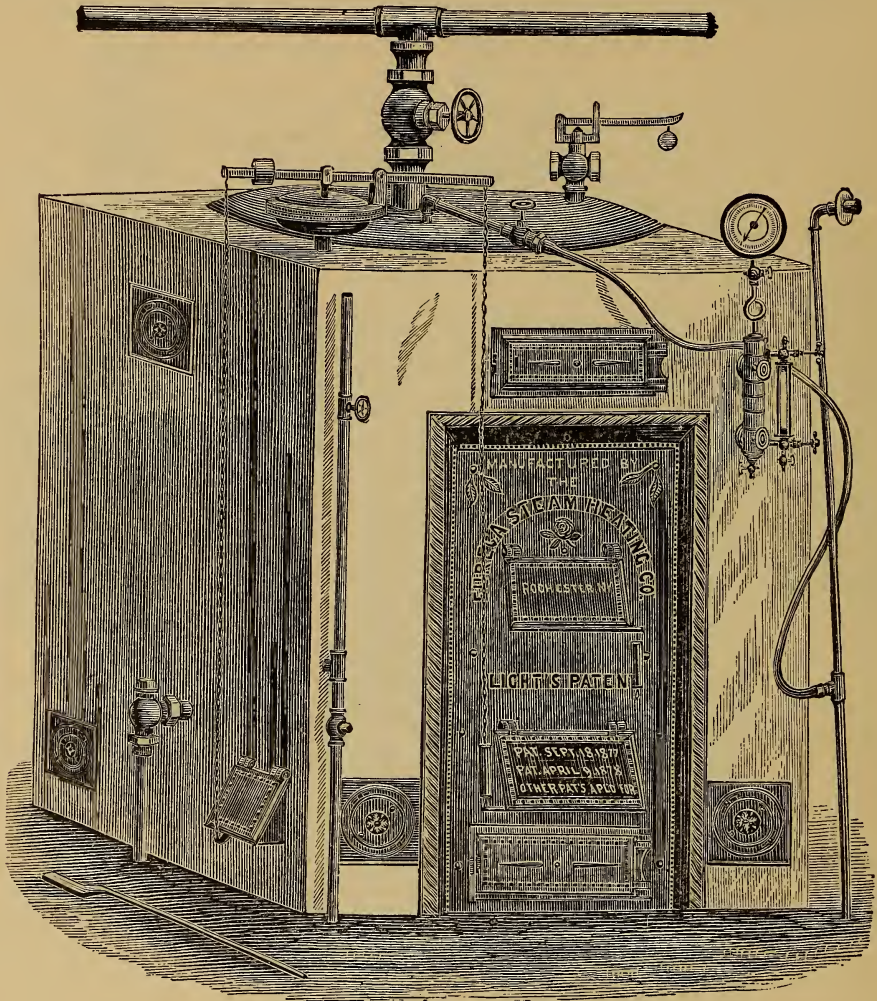


Fig. 140.

SET IN BRICK, WITH TRIMMINGS AND FIXTURES COMPLETE.

## EXPLANATION.

At the top will be seen the main steam feed pipe with valve set to same; also safety valve. A connection for the steam cleaner with valve set at front edge, and, for convenient illustration, we have shown the hose and cleaner attachment complete.

By this attachment to clean the boiler flues, the valve in feed pipe would be closed, steam run up to ten or twelve pounds, when, on opening the door above ornamental front and inserting the cleaner, each tube may be blown clean of soot, also any recesses in or around the boiler. Hand holes, for cleaning out soot accumulations at base of boiler work, are shown on side and front. At the right upper corner is seen the Combination Box with Trycocks, Water Gauge and Steam Gauge attached.

On the left hand upper corner is seen the Automatic Regulating Apparatus, with its attachments. The chain at right hand of bar connects to the draft door and the one on the opposite end to the door of the cold-air check draft. By increasing the weight seen on the left hand end of bar, the fire and steam is increased, and by decreasing the weight the intensity of the fire and steam is reduced, and the weights may be so adjusted as to hold the steam continuously at one's will. At front left hand corner of brick work is seen the water connection with the valve shut off. Also below the inlet to boiler, is seen the waste or blow-off attachment, for cleaning the boiler of water or sediment, which waste should connect to sewer.

At the left hand lower center is seen the connection for return to boiler of waters of condensation, with a check valve on the angle. The ornamental front shows the doors opening into fire pot, the draft door opening to between the fire and ash grates, and ash door opening to underneath ash grate for the removal of ashes. That part of the lower center front containing the draft and ash doors is removable to admit of replacing the grates.

## LIST AND DESCRIPTION IN DETAIL

— OF ALL SIZES OF THE —

## EUREKA STEAM HEATING APPARATUS.

| Number of Boiler. | List Price of Each. | Depth of Fire Pot. | Diameter of Fire Pot. | Diameter of Shell. | Length of Shell. | Diameter of Tubes. | Length of Tubes. | Number of Tubes. | Gauge of Shell. | Gauge of Heads. | Space between Boiler and Dome. | Height of Dome. | Diameter of Dome. | Depth under Ash Grate. | Height between Grates. | Height of Base. | Height of Water Line. | Total Height. | Feet of Heat Surface. | Size Steam Feed. | Size Return Pipe. | Number of Brick Required to Set. | Size Square of Brick Work. | Diameter of Circ. Smoke Flue. | Number of Cubic Feet Each Boiler will Carry Radiation for. |
|-------------------|---------------------|--------------------|-----------------------|--------------------|------------------|--------------------|------------------|------------------|-----------------|-----------------|--------------------------------|-----------------|-------------------|------------------------|------------------------|-----------------|-----------------------|---------------|-----------------------|------------------|-------------------|----------------------------------|----------------------------|-------------------------------|------------------------------------------------------------|
| 1                 | 170.00              | 18                 | 18                    | 22                 | 36               | 21                 | 18               | 19               | 14              | 3               | 4                              | 57              | 28                | 7                      | 9                      | 17              | 50                    | 63            | 49                    | 2                | 1 1/2             | 900                              | 44                         | 8                             | 16,000 to 20,000                                           |
| 2                 | 190.00              | 18                 | 18                    | 22                 | 42               | 21                 | 24               | 19               | 14              | 3               | 4                              | 57              | 28                | 7                      | 9                      | 17              | 56                    | 69            | 58                    | 2                | 1 1/2             | 950                              | 44                         | 8                             | 19,000 to 25,000                                           |
| 3                 | 215.00              | 18                 | 23                    | 27                 | 36               | 21                 | 18               | 32               | 14              | 3               | 4                              | 67              | 33                | 7                      | 11                     | 19              | 52                    | 66            | 70                    | 2 1/2            | 1 1/2             | 1,050                            | 49                         | 10                            | 23,000 to 30,000                                           |
| 4                 | 230.00              | 18                 | 23                    | 27                 | 40               | 21                 | 22               | 32               | 14              | 3               | 4                              | 67              | 33                | 7                      | 11                     | 19              | 56                    | 70            | 80                    | 2 1/2            | 1 1/2             | 1,100                            | 49                         | 10                            | 26,000 to 35,000                                           |
| 5                 | 255.00              | 18                 | 27                    | 31                 | 36               | 21                 | 21               | 48               | 14              | 3               | 5                              | 74              | 37                | 7                      | 13                     | 21              | 54                    | 73            | 93                    | 3                | 2                 | 1,350                            | 53                         | 12                            | 31,000 to 40,000                                           |
| 6                 | 270.00              | 18                 | 27                    | 31                 | 38               | 21                 | 21               | 48               | 14              | 3               | 5                              | 84              | 37                | 7                      | 13                     | 21              | 57                    | 78            | 103                   | 3                | 2                 | 1,400                            | 53                         | 12                            | 34,000 to 45,000                                           |
| 7                 | 300.00              | 18                 | 30 1/4                | 34 1/4             | 38               | 21                 | 20               | 56               | 14              | 3               | 5                              | 84              | 40 1/4            | 7                      | 15                     | 23              | 58                    | 74            | 115                   | 3 1/2            | 2                 | 1,500                            | 57                         | 13 1/2                        | 38,000 to 50,000                                           |
| 8                 | 320.00              | 18                 | 30 1/4                | 34 1/4             | 41               | 21                 | 23               | 56               | 14              | 3               | 5                              | 88 1/4          | 44 1/2            | 8                      | 15                     | 23              | 61                    | 77            | 127                   | 3 1/2            | 2                 | 1,550                            | 57                         | 13 1/2                        | 42,000 to 55,000                                           |
| 9                 | 350.00              | 18                 | 34 1/2                | 38 1/2             | 46               | 21                 | 21               | 85               | 14              | 3               | 5                              | 88 1/4          | 44 1/2            | 8                      | 18                     | 25              | 68                    | 74            | 141                   | 4                | 2 1/2             | 1,600                            | 61                         | 15 1/2                        | 47,000 to 62,000                                           |
| 10                | 370.00              | 18                 | 34 1/2                | 38 1/2             | 39               | 21                 | 24               | 85               | 14              | 3               | 5                              | 88 1/4          | 44 1/2            | 8                      | 18                     | 25              | 61                    | 77            | 158                   | 4                | 2 1/2             | 1,700                            | 61                         | 15 1/2                        | 53,000 to 70,000                                           |
| 11                | 390.00              | 18                 | 34 1/2                | 38 1/2             | 42               | 21                 | 27               | 85               | 14              | 3               | 5                              | 88 1/4          | 44 1/2            | 8                      | 18                     | 25              | 64                    | 80            | 174                   | 4                | 2 1/2             | 1,750                            | 61                         | 15 1/2                        | 58,000 to 80,000                                           |
| 12                | 410.00              | 18                 | 34 1/2                | 38 1/2             | 45               | 21                 | 30               | 85               | 14              | 3               | 5                              | 88 1/4          | 44 1/2            | 8                      | 18                     | 25              | 67                    | 83            | 190                   | 4                | 2 1/2             | 1,850                            | 61                         | 15 1/2                        | 63,000 to 90,000                                           |
| 13                | 430.00              | 18                 | 34 1/2                | 38 1/2             | 48               | 21                 | 30               | 85               | 14              | 3               | 5                              | 88 1/4          | 44 1/2            | 8                      | 18                     | 25              | 70                    | 86            | 206                   | 4                | 2 1/2             | 1,950                            | 61                         | 15 1/2                        | 68,000 to 100,000                                          |
| 14                | 450.00              | 18                 | 34 1/2                | 38 1/2             | 51               | 21                 | 33               | 85               | 14              | 3               | 5                              | 88 1/4          | 44 1/2            | 8                      | 18                     | 25              | 73                    | 89            | 222                   | 4                | 2 1/2             | 2,000                            | 61                         | 15 1/2                        | 74,000 to 110,000                                          |
| 15                | 470.00              | 18                 | 34 1/2                | 38 1/2             | 54               | 21                 | 36               | 85               | 14              | 3               | 5                              | 88 1/4          | 44 1/2            | 8                      | 18                     | 25              | 76                    | 92            | 237                   | 4                | 2 1/2             | 2,050                            | 61                         | 15 1/2                        | 79,000 to 115,000                                          |
| 16                | 500.00              | 21                 | 41 1/2                | 45 1/2             | 48               | 21                 | 37               | 109              | 14              | 3               | 5                              | 84              | 51 1/2            | 8                      | 19                     | 27              | 72                    | 89            | 251                   | 4 to 5           | 3                 | 2,300                            | 68                         | 18 1/2                        | 84,000 to 125,000                                          |
| 17                | 520.00              | 21                 | 41 1/2                | 45 1/2             | 51               | 21                 | 41 1/2           | 109              | 14              | 3               | 5                              | 84              | 51 1/2            | 8                      | 19                     | 27              | 75                    | 92            | 272                   | 4 to 5           | 3                 | 2,400                            | 68                         | 18 1/2                        | 90,000 to 135,000                                          |
| 18                | 540.00              | 21                 | 41 1/2                | 45 1/2             | 54               | 21                 | 33               | 109              | 14              | 3               | 5                              | 84              | 51 1/2            | 8                      | 19                     | 27              | 78                    | 95            | 292                   | 4 to 5           | 3                 | 2,500                            | 68                         | 18 1/2                        | 97,000 to 145,000                                          |
| 19                | 560.00              | 21                 | 41 1/2                | 45 1/2             | 57               | 21                 | 36               | 109              | 14              | 3               | 5                              | 84              | 51 1/2            | 8                      | 19                     | 27              | 81                    | 98            | 313                   | 4 to 5           | 3                 | 2,550                            | 68                         | 18 1/2                        | 105,000 to 160,000                                         |
| 20                | 580.00              | 21                 | 41 1/2                | 45 1/2             | 60               | 21                 | 39               | 109              | 14              | 3               | 5                              | 84              | 51 1/2            | 8                      | 19                     | 27              | 84                    | 101           | 334                   | 4 to 5           | 3                 | 2,650                            | 68                         | 18 1/2                        | 112,000 to 168,000                                         |
| 21                | 600.00              | 21                 | 41 1/2                | 45 1/2             | 63               | 21                 | 42               | 109              | 14              | 3               | 5                              | 84              | 51 1/2            | 8                      | 19                     | 27              | 87                    | 104           | 355                   | 4 to 5           | 3                 | 2,700                            | 68                         | 18 1/2                        | 118,000 to 175,000                                         |
| 22                | 620.00              | 21                 | 41 1/2                | 45 1/2             | 66               | 21                 | 45               | 109              | 14              | 3               | 5                              | 84              | 51 1/2            | 8                      | 19                     | 27              | 90                    | 107           | 376                   | 4 to 5           | 3                 | 2,850                            | 68                         | 18 1/2                        | 126,000 to 185,000                                         |
| 23                | 640.00              | 21                 | 41 1/2                | 45 1/2             | 69               | 21                 | 48               | 109              | 14              | 3               | 5                              | 84              | 51 1/2            | 8                      | 19                     | 27              | 93                    | 110           | 396                   | 4 to 5           | 3                 | 2,900                            | 68                         | 18 1/2                        | 132,000 to 200,000                                         |
| 24                | 660.00              | 21                 | 41 1/2                | 45 1/2             | 72               | 21                 | 51               | 109              | 14              | 3               | 5                              | 84              | 51 1/2            | 8                      | 19                     | 27              | 96                    | 113           | 417                   | 4 to 5           | 3                 | 2,950                            | 68                         | 18 1/2                        | 140,000 to 210,000                                         |

Number of Cubic Feet  
Each Boiler will  
Carry Radiation for.



## EUREKA LOW PRESSURE STEAM HEATING APPARATUS.

The table, page 41, in its number and variety, serves the trade much better than any list on the market. With this list the trade are enabled to go into the smallest buildings, and from that, on a graduated scale, up to the largest buildings. Not only do we furnish a better list, but the excellence of construction and perfect working conveniences furnished with each boiler, make them far more desirable than any work to be found. The superior conditions are as follows, viz. :

I. The entire surfaces, inside and out, are fire surfaces.

II. The exterior surfaces, instead of being exposed to the cold air, which chills the same, acting against the fire surfaces, are turned to the fire.

III. From thirty-three to fifty per cent. is added to the steam generating surfaces, and with the same fire thirty three to fifty per cent. more of steam is made, or the same steam with from twenty-five to thirty-five per cent. less fuel.

IV. The steam taken from the supplemental steam chamber is dryer, stronger steam, free from priming, and more active in circulation.

V. The convenience of the clear space on the steam chamber for leading out the supply pipes is superior to any vertical constructions before the public.

VI. The smoke pipe opening out at the side is easily accessible at any time for cleaning, and is removed without extra labor or the removal of other work.

VII. The arrangement of the cast iron base, with the grate conveniences, is superior to that of any other boiler.

VIII. While it is of the most thorough construction, it can be supplied to the public at as low prices as any good work.

IX. The expense of setting is very light compared with most other boilers.

All these boilers are made of the best C. H. No. 1 flange and fire-box irons, and the tubes of best make. All boilers are fitted entire before leaving the shop, and of a strength of one hundred and fifty pounds hydrostatic pressure to the square inch.

We would especially call the attention of all to the patent fire grate, which is a shake and dump grate, or is easily cleaned at any time without losing the fire. The convenience of this grate alone is worth more than the value of most boilers. With this convenience, fire may be carried from Fall to Spring, if wished.

Boilers of all sizes, COMPLETE, consist of one boiler proper, with supplemental steam chamber, with three nipples and locknuts for connection to the boiler. Also, one full ornamental front, with doors, one feed mouth, one fire grate and grate bar, one ash grate (two pieces), one base, one base plate, one hoe, one poker, one shaker, one direct and indirect smoke flue with dampers, three handles and "S" for doors, five hand-hole boxes, one steam cleaner, one cleaner box with door, one check draft box and door, one combination box. A base with fire grate only will be furnished with the larger sizes, if the depth of cellar will not admit of setting base with both grates.

## EUREKA RADIATORS.

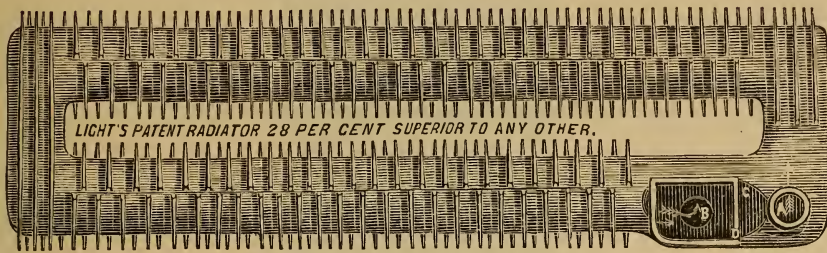


Fig. 141.

Fig. 83 is a side view, showing a radiator with its construction, and quadruple extended surfaces. The steam entering at the port *a*, passes up and through the radiator, returning to *b* (at which point the surface is removed to show working parts), where it passes out at the opposite side into the next radiator of the series. The diaphragm *c*, seen between the ports *a* and *b*, having underneath a pocket or water seal *d*, is a cut-off, giving the steam a positive circulation the entire length of the pipes, and also furnishing the waters of condensation, which return to this point from both pipes, a ready means of exit, they passing either way underneath the diaphragm, and discharging through either of the nipples, as may be necessary.

The surface of the radiators (when made up) pocket into each other, and those on opposite radiators (at their sides) on to and under each other at the ends of the flanges, so that any two of the continuous flanges of two radiators, form a separate passage from that of any other of the several passages, for the air passing between the said two radiators. By this means the air is thoroughly stratified, and the size of the passages may be increased or decreased as necessary, according to the strength of the current of air that is to feed through the same. This stratification of the air brings it evenly against the heated surfaces, without its passing, in strong gusts, unevenly heated to the rooms above.

In *simplicity of construction and results*, no radiator on the market compares with this :—

1st. It gives twenty-eight per cent. more of radiating surface to the square foot of body surface than any other.

2d. It is more easily connected or disconnected in its place than any other.

3d. It having a larger per cent. of surface to its net weight than others, its radiating surfaces are stronger.

4th. It occupies less size of chamber, in proportion to its surfaces, than any other.

5th. It manipulates the air more *thoroughly* and *evenly* than any other.

6th. The lock joint will not admit of any one radiator dropping out of line with the others.

7th. It requires sixty per cent. less of fittings to connect it in stack, than any other positive-circulating, end-connecting radiator.

8th. It is more easily connected by ordinary tools than any other.

9th. While containing all these superiorities, it has no defects or objections existing against it.

As to the desirableness of an all-thread connection, in preference to packed joints (existing in most works on the market), there is no question in the judgment of practical men.

## EUREKA RADIATORS.

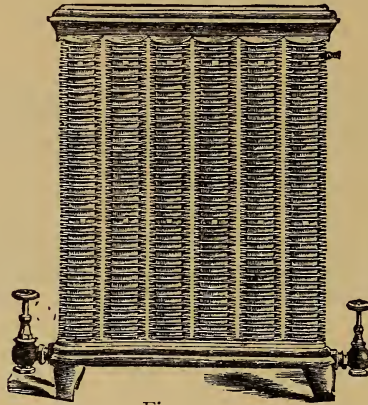


Fig. 142.

| NUMBER OF ROWS. | TUBES IN EACH ROW. | SURFACE.     | EXTREME LENGTH. |                  | EXTREME WIDTH.   | SIZE OF VALVES. |                 |
|-----------------|--------------------|--------------|-----------------|------------------|------------------|-----------------|-----------------|
|                 |                    |              | FEET.           | INCHES.          |                  | FEED.           | RETURN.         |
|                 |                    | SQUARE FEET. |                 |                  | INCHES.          | INCHES.         | INCHES.         |
| SINGLE ROW.     | 1 x 2              | 10           |                 | 8 $\frac{1}{2}$  | 7                | 1               | $\frac{3}{4}$   |
|                 | 1 x 3              | 15           |                 | 12 $\frac{1}{2}$ | 7                | 1               | $\frac{3}{4}$   |
|                 | 1 x 4              | 20           | 1               | 4                | 7                | 1               | $\frac{3}{4}$   |
|                 | 1 x 5              | 25           | 1               | 7 $\frac{1}{2}$  | 7                | 1               | $\frac{3}{4}$   |
|                 | 1 x 6              | 30           | 2               | 0 $\frac{1}{4}$  | 7 $\frac{1}{2}$  | 1               | $\frac{3}{4}$   |
|                 | 1 x 7              | 35           | 2               | 3 $\frac{3}{4}$  | 7 $\frac{1}{2}$  | 1               | $\frac{3}{4}$   |
|                 | 1 x 8              | 40           | 2               | 7 $\frac{3}{4}$  | 7 $\frac{1}{2}$  | 1               | $\frac{3}{4}$   |
|                 | 1 x 9              | 45           | 2               | 11 $\frac{1}{2}$ | 7 $\frac{1}{2}$  | 1               | $\frac{3}{4}$   |
|                 | 1 x 10             | 50           | 3               | 3 $\frac{1}{4}$  | 7 $\frac{1}{2}$  | 1               | $\frac{3}{4}$   |
|                 | 2 x 3              | 30           | 1               | 1 $\frac{3}{4}$  | 12 $\frac{1}{2}$ | 1               | $\frac{3}{4}$   |
| TWO ROWS.       | 2 x 4              | 40           | 1               | 5                | 12 $\frac{1}{2}$ | 1               | $\frac{3}{4}$   |
|                 | 2 x 5              | 50           | 1               | 8 $\frac{1}{2}$  | 12 $\frac{1}{2}$ | 1               | $\frac{3}{4}$   |
|                 | 2 x 6              | 60           | 2               | 0 $\frac{1}{2}$  | 12 $\frac{1}{2}$ | 1 $\frac{1}{4}$ | 1               |
|                 | 2 x 7              | 70           | 2               | 4                | 12 $\frac{1}{2}$ | 1 $\frac{1}{4}$ | 1               |
|                 | 2 x 8              | 80           | 2               | 7 $\frac{3}{4}$  | 12 $\frac{1}{2}$ | 1 $\frac{1}{4}$ | 1               |
|                 | 2 x 9              | 90           | 2               | 11 $\frac{1}{2}$ | 12 $\frac{1}{2}$ | 1 $\frac{1}{4}$ | 1               |
|                 | 2 x 10             | 100          | 3               | 3 $\frac{1}{4}$  | 12 $\frac{1}{2}$ | 1 $\frac{1}{2}$ | 1 $\frac{1}{4}$ |
|                 | 2 x 11             | 110          | 3               | 7                | 12 $\frac{1}{2}$ | 1 $\frac{1}{2}$ | 1 $\frac{1}{4}$ |
|                 | 2 x 12             | 120          | 3               | 10 $\frac{3}{4}$ | 12 $\frac{1}{2}$ | 1 $\frac{1}{2}$ | 1 $\frac{1}{4}$ |
|                 | 2 x 13             | 130          | 4               | 2 $\frac{3}{4}$  | 12 $\frac{1}{2}$ | 1 $\frac{1}{2}$ | 1 $\frac{1}{4}$ |
|                 | 2 x 14             | 140          | 4               | 6 $\frac{1}{2}$  | 12 $\frac{1}{2}$ | 1 $\frac{1}{2}$ | 1 $\frac{1}{4}$ |
|                 | 2 x 15             | 150          | 4               | 10               | 12 $\frac{1}{2}$ | 1 $\frac{1}{2}$ | 1 $\frac{1}{4}$ |

Other sizes desired must be specified when ordered.

## THE ADVANTAGES OF THE EUREKA DIRECT RADIATORS.

FIRST.—Beauty of design, finish and appearance—the general design, especially the top, being handsomer and more elaborate than any other on the market.

SECOND.—The diameter of the tubes being large, gives a prompt and easy circulation of steam.

THIRD.—The formation of the base, peculiar to this radiator, is such that water can not remain in it, and it relieves through feed valves or return as desired.

FOURTH.—Each tube being independent, there is no strain to joints from expansion as is the case with double tube return bend shape of radiators.

FIFTH.—In case of breakage, the broken tube can be easily removed and a new one substituted, the only machinery required being an ordinary screw wrench.

SIXTH.—There is a greater amount of radiating surface in the same floor space than with any other radiator.

SEVENTH.—The extended surfaces act as deflectors, throwing heat to the floor—results not attained by ordinary radiators.

EIGHTH.—In the sizes having two rows of tubes, the open air space between the tubes being liberal, allows a freer circulation of air than most other radiators.

NINTH.—Owing to the large size of the tubes, and the size and peculiar formation of the base, this radiator is especially adapted to the single pipe system of an individual construction, and is particularly adapted to the Holly system of steam heating.



## WALWORTH RADIATORS.

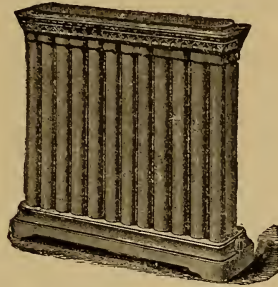


Fig. 143.

## RECTANGULAR.

| Number of Rows. | Tubes in Each Row. | Surface-Sq. Feet. | Length.                  | Width.          | Valves Required.    |                     |
|-----------------|--------------------|-------------------|--------------------------|-----------------|---------------------|---------------------|
|                 |                    |                   |                          |                 | Supply.             | Return.             |
| SINGLE ROW.     | 1 x 4.             | 4                 | Ft. In. 10 $\frac{1}{4}$ | 4 $\frac{1}{4}$ | Inch. $\frac{3}{4}$ | Inch. $\frac{3}{4}$ |
|                 | 1 x 6.             | 6                 | 1 2 $\frac{1}{4}$        | 4 $\frac{1}{4}$ | $\frac{3}{4}$       | $\frac{3}{4}$       |
|                 | 1 x 8.             | 8                 | 1 6 $\frac{1}{4}$        | 4 $\frac{1}{4}$ | $\frac{3}{4}$       | $\frac{3}{4}$       |
|                 | 1 x 12.            | 12                | 2 2 $\frac{1}{4}$        | 4 $\frac{1}{4}$ | $\frac{3}{4}$       | $\frac{3}{4}$       |
|                 | 1 x 16.            | 16                | 2 10 $\frac{1}{4}$       | 4 $\frac{1}{4}$ | $\frac{3}{4}$       | $\frac{3}{4}$       |
|                 | 1 x 20.            | 20                | 3 6 $\frac{1}{4}$        | 4 $\frac{1}{4}$ | 1                   | $\frac{3}{4}$       |
|                 | 1 x 24.            | 24                | 4 2 $\frac{1}{4}$        | 4 $\frac{1}{4}$ | 1                   | $\frac{3}{4}$       |
|                 | 1 x 28.            | 28                | 4 10 $\frac{1}{4}$       | 4 $\frac{1}{4}$ | 1                   | $\frac{3}{4}$       |
|                 | 1 x 32.            | 32                | 5 6 $\frac{1}{4}$        | 4 $\frac{1}{4}$ | 1                   | $\frac{3}{4}$       |
|                 | 1 x 38.            | 38                | 6 6 $\frac{1}{4}$        | 4 $\frac{1}{4}$ | 1 $\frac{1}{4}$     | 1                   |
| TWO ROWS.       | 2 x 4.             | 8                 | 10 $\frac{1}{4}$         | 6 $\frac{1}{4}$ | $\frac{3}{4}$       | $\frac{3}{4}$       |
|                 | 2 x 8.             | 16                | 1 6 $\frac{1}{4}$        | 6 $\frac{1}{4}$ | $\frac{3}{4}$       | $\frac{3}{4}$       |
|                 | 2 x 10.            | 20                | 1 10 $\frac{1}{4}$       | 6 $\frac{1}{4}$ | 1                   | $\frac{3}{4}$       |
|                 | 2 x 12.            | 24                | 2 2 $\frac{1}{4}$        | 6 $\frac{1}{4}$ | 1                   | $\frac{3}{4}$       |
|                 | 2 x 16.            | 32                | 2 10 $\frac{1}{4}$       | 6 $\frac{1}{4}$ | 1                   | $\frac{3}{4}$       |
|                 | 2 x 20.            | 40                | 3 6 $\frac{1}{4}$        | 6 $\frac{1}{4}$ | 1                   | $\frac{3}{4}$       |
|                 | 2 x 24.            | 48                | 4 2 $\frac{1}{4}$        | 6 $\frac{1}{4}$ | 1 $\frac{1}{4}$     | 1                   |
|                 | 2 x 28.            | 56                | 4 10 $\frac{1}{4}$       | 6 $\frac{1}{4}$ | 1 $\frac{1}{4}$     | 1                   |
|                 | 2 x 32.            | 64                | 5 6 $\frac{1}{4}$        | 6 $\frac{1}{4}$ | 1 $\frac{1}{4}$     | 1                   |
|                 | 2 x 38.            | 76                | 6 6 $\frac{1}{4}$        | 6 $\frac{1}{4}$ | 1 $\frac{1}{4}$     | 1                   |
| THREE ROWS.     | 3 x 4.             | 12                | 10 $\frac{1}{4}$         | 8 $\frac{1}{4}$ | $\frac{3}{4}$       | $\frac{3}{4}$       |
|                 | 3 x 8.             | 24                | 1 6 $\frac{1}{4}$        | 8 $\frac{1}{4}$ | $\frac{3}{4}$       | $\frac{3}{4}$       |
|                 | 3 x 12.            | 36                | 2 2 $\frac{1}{4}$        | 8 $\frac{1}{4}$ | 1                   | $\frac{3}{4}$       |
|                 | 3 x 16.            | 48                | 2 10 $\frac{1}{4}$       | 8 $\frac{1}{4}$ | 1                   | $\frac{3}{4}$       |
|                 | 3 x 20.            | 60                | 3 6 $\frac{1}{4}$        | 8 $\frac{1}{4}$ | 1 $\frac{1}{4}$     | 1                   |
|                 | 3 x 24.            | 72                | 4 2 $\frac{1}{4}$        | 8 $\frac{1}{4}$ | 1 $\frac{1}{4}$     | 1                   |
|                 | 3 x 28.            | 84                | 4 10 $\frac{1}{4}$       | 8 $\frac{1}{4}$ | 1 $\frac{1}{4}$     | 1                   |
|                 | 3 x 32.            | 96                | 5 6 $\frac{1}{4}$        | 8 $\frac{1}{4}$ | 1 $\frac{1}{4}$     | 1                   |
|                 | 3 x 38.            | 114               | 6 6 $\frac{1}{4}$        | 8 $\frac{1}{4}$ | 1 $\frac{1}{4}$     | 1                   |
| FOUR ROWS.      | 4 x 4.             | 16                | 10 $\frac{1}{4}$         | 10              | $\frac{3}{4}$       | $\frac{3}{4}$       |
|                 | 4 x 8.             | 32                | 1 6 $\frac{1}{4}$        | 10              | 1                   | $\frac{3}{4}$       |
|                 | 4 x 12.            | 48                | 2 2 $\frac{1}{4}$        | 10              | 1                   | $\frac{3}{4}$       |
|                 | 4 x 16.            | 64                | 2 10 $\frac{1}{4}$       | 10              | 1 $\frac{1}{4}$     | 1                   |
|                 | 4 x 20.            | 80                | 3 6 $\frac{1}{4}$        | 10              | 1 $\frac{1}{4}$     | 1                   |
|                 | 4 x 24.            | 96                | 4 2 $\frac{1}{4}$        | 10              | 1 $\frac{1}{4}$     | 1 $\frac{1}{4}$     |
|                 | 4 x 28.            | 112               | 4 10 $\frac{1}{4}$       | 10              | 1 $\frac{1}{4}$     | 1 $\frac{1}{4}$     |
|                 | 4 x 32.            | 128               | 5 6 $\frac{1}{4}$        | 10              | 1 $\frac{1}{4}$     | 1 $\frac{1}{4}$     |



Radiators.—CONTINUED.

CIRCULAR.


|                                                                                   |                                       |                       |           |                                |                               |                               |
|-----------------------------------------------------------------------------------|---------------------------------------|-----------------------|-----------|--------------------------------|-------------------------------|-------------------------------|
|  |                                       | Surface.<br>Sq. Feet. | Diameter. |                                | Valves Required.              |                               |
|                                                                                   |                                       |                       |           |                                | Supply.                       | Return.                       |
|                                                                                   | No. 1, Circular .....                 | 18                    | Ft.       | In.                            |                               |                               |
|                                                                                   | “ 2, “ .....                          | 30                    | 1         | 13 <sup>1</sup> / <sub>4</sub> | 3 <sup>3</sup> / <sub>4</sub> | 3 <sup>3</sup> / <sub>4</sub> |
|                                                                                   | “ 3, “ .....                          | 54                    | 1         | 6 <sup>1</sup> / <sub>2</sub>  | 3 <sup>3</sup> / <sub>4</sub> | 3 <sup>3</sup> / <sub>4</sub> |
|                                                                                   | “ 4, “ .....                          | 72                    | 2         | 21 <sup>1</sup> / <sub>2</sub> | 1                             | 3 <sup>3</sup> / <sub>4</sub> |
|                                                                                   | “ 5, “ .....                          | 102                   | 2         | 10 <sup>1</sup> / <sub>4</sub> | 1 <sup>1</sup> / <sub>4</sub> | 1                             |
|                                                                                   | “ 6, “ .....                          | 130                   | 3         | 2                              | 1 <sup>1</sup> / <sub>4</sub> | 1 <sup>1</sup> / <sub>4</sub> |
|                                                                                   | “ 7, “ .....                          | 160                   | 3         | 2                              | 1 <sup>1</sup> / <sub>4</sub> | 1 <sup>1</sup> / <sub>4</sub> |
|                                                                                   | In Halves<br>To Surround<br>Columns { |                       |           |                                |                               |                               |
|                                                                                   | “ No. 10. ....                        | 56                    | 2         | 21 <sup>1</sup> / <sub>2</sub> | 1 <sup>1</sup> / <sub>4</sub> | 1                             |
|                                                                                   | “ 11. ....                            | 80                    | 2         | 41 <sup>1</sup> / <sub>4</sub> | 1 <sup>1</sup> / <sub>4</sub> | 1 <sup>1</sup> / <sub>4</sub> |
|                                                                                   | “ 12. ....                            | 102                   | 2         | 9 <sup>1</sup> / <sub>2</sub>  | 1 <sup>1</sup> / <sub>4</sub> | 1 <sup>1</sup> / <sub>4</sub> |
|                                                                                   | “ 13. ....                            | 130                   | 3         | 2                              | 1 <sup>1</sup> / <sub>4</sub> | 1 <sup>1</sup> / <sub>4</sub> |
|                                                                                   | “ 14. ....                            | 160                   | 3         | 2                              | 1 <sup>1</sup> / <sub>4</sub> | 1 <sup>1</sup> / <sub>4</sub> |

Fig. 144.

INDIRECT.



Fig. 145.

|                     |                                  |                               |                               |                               |
|---------------------|----------------------------------|-------------------------------|-------------------------------|-------------------------------|
|                     | Length of<br>Base.               | Width of<br>Base.             | Supply.                       | Return.                       |
|                     | Ft.                              | In.                           |                               |                               |
| 16 Square Feet..... | 9 <sup>1</sup> / <sub>2</sub>    | 7 <sup>5</sup> / <sub>8</sub> | 1                             | 3 <sup>3</sup> / <sub>4</sub> |
| 24 “ “ .....        | 1 11 <sup>1</sup> / <sub>2</sub> | 7 <sup>5</sup> / <sub>8</sub> | 1                             | 3 <sup>3</sup> / <sub>4</sub> |
| 32 “ “ .....        | 1 5 <sup>1</sup> / <sub>2</sub>  | 7 <sup>5</sup> / <sub>8</sub> | 1                             | 3 <sup>3</sup> / <sub>4</sub> |
| 40 “ “ .....        | 1 9 <sup>1</sup> / <sub>2</sub>  | 7 <sup>5</sup> / <sub>8</sub> | 1                             | 3 <sup>3</sup> / <sub>4</sub> |
| 48 “ “ .....        | 2 11 <sup>1</sup> / <sub>2</sub> | 7 <sup>5</sup> / <sub>8</sub> | 1 <sup>1</sup> / <sub>4</sub> | 1                             |
| 64 “ “ .....        | 2 9 <sup>1</sup> / <sub>2</sub>  | 7 <sup>5</sup> / <sub>8</sub> | 1 <sup>1</sup> / <sub>4</sub> | 1                             |
| 80 “ “ .....        | 3 5 <sup>1</sup> / <sub>2</sub>  | 7 <sup>5</sup> / <sub>8</sub> | 1 <sup>1</sup> / <sub>4</sub> | 1                             |
| 96 “ “ .....        | 4 11 <sup>1</sup> / <sub>2</sub> | 7 <sup>5</sup> / <sub>8</sub> | 1 <sup>1</sup> / <sub>4</sub> | 1                             |
| 112 “ “ .....       | 4 9 <sup>1</sup> / <sub>2</sub>  | 7 <sup>5</sup> / <sub>8</sub> | 1 <sup>1</sup> / <sub>4</sub> | 1                             |

Radiators bronzed or painted must be boxed at extra cost.

The warming capacity and cost of Circular Radiators may be varied by leaving out any number of tubes, except the outer row, without changing the external appearance. The tubes left out may be replaced at will.

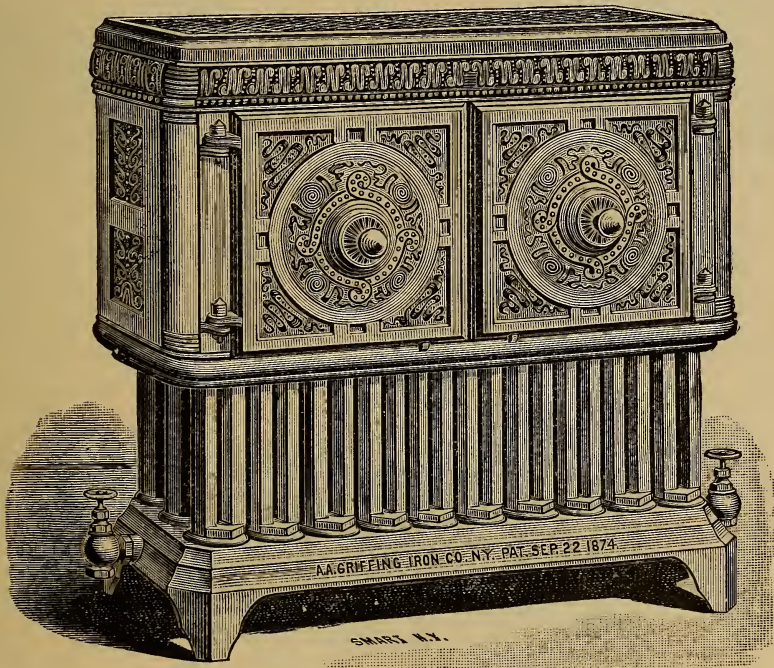
Radiators may be made of any desired height; the standard height is 35 inches. A Circular Radiator with marble top makes a handsome table. The colored marbles, known as the “Knoxville,” and No. 2 Tennessee, are well adapted to Radiators, as they are not discolored by heat.

## BUNDY RADIATORS.

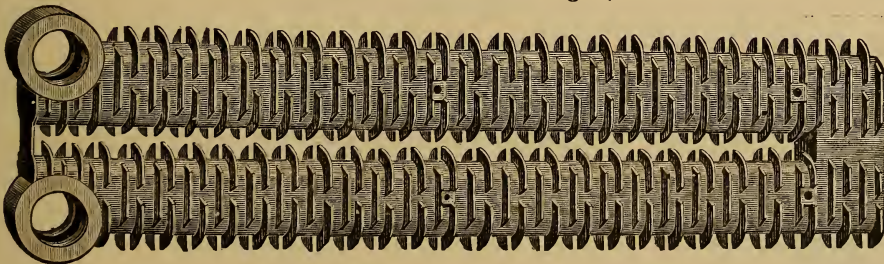
DIRECT RADIATOR. Fig. 146.



HOT CLOSET RADIATOR. Fig. 147.



INDIRECT RADIATOR. Fig. 148.



Catalogues containing full information regarding these goods, together with prices, furnished on application.



IRON PIPE COILS.

Ornamental Box Coil.

FOR SIZES SEE TABLE, PAGE 40.

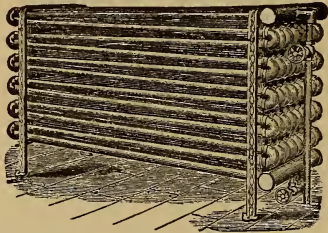


Fig. 149.

Plain Box Coil.

FOR SIZES SEE TABLE, PAGE 40.

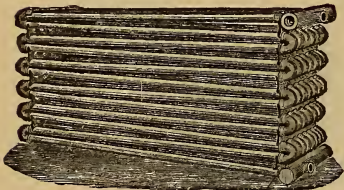


Fig. 150.

Ornamental Bracket Coil.

ONE AND TWO TUBES WIDE.

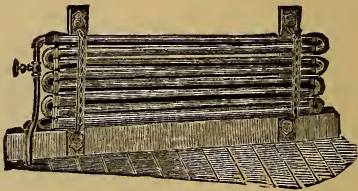


Fig. 151.

PATENT IMPROVED STEAM TRAPS.

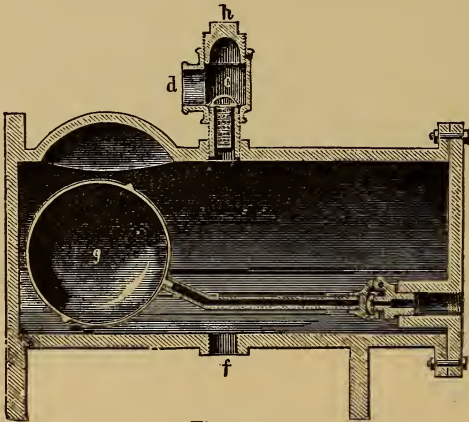


Fig. 152.

| SIZE.      |  | DRAINING CAPACITY.         | PRICE, EACH. |
|------------|--|----------------------------|--------------|
| No. 1..... |  | 1,500 feet of 1-inch pipe. | \$25 00      |
| " 2.....   |  | 4,000 " " "                | 35 00        |
| " 3.....   |  | 10,000 " " "               | 65 00        |

STEAM TRAPS.



Fig. 153.

| SIZE.         |  | DRAINING CAPACITY.         | PRICE, EACH. |
|---------------|--|----------------------------|--------------|
| 12-inch ..... |  | 1,500 feet of 1-inch pipe. | \$23 00      |
| 15-inch ..... |  | 3 500 " " "                | 36 00        |
| 18-inch ..... |  | 5,000 " " "                | 54 00        |

**TABLE OF NUMBERS AND SIZES**  
OF  
**ONE-INCH BOX COILS.**

| NUMBER OF COILS. | FEET OF PIPE IN COIL. | LENGTH OF COIL, INCHES. | NUMBER OF PIPES WIDE. | NUMBER OF PIPES HIGH. | NUMBER OF COILS. | FEET OF PIPE IN COIL. | LENGTH OF COIL, INCHES. | NUMBER OF PIPES WIDE. | NUMBER OF PIPES HIGH. | NUMBER OF COILS. | FEET OF PIPE IN COIL. | LENGTH OF COIL, INCHES. | NUMBER OF PIPES WIDE. | NUMBER OF PIPES HIGH. | NUMBER OF COILS. | FEET OF PIPE IN COIL. | LENGTH OF COIL, INCHES. | NUMBER OF PIPES WIDE. | NUMBER OF PIPES HIGH. |
|------------------|-----------------------|-------------------------|-----------------------|-----------------------|------------------|-----------------------|-------------------------|-----------------------|-----------------------|------------------|-----------------------|-------------------------|-----------------------|-----------------------|------------------|-----------------------|-------------------------|-----------------------|-----------------------|
| 1                | 56                    | 39                      | 3                     | 6                     | 26               | 156                   | 39                      | 6                     | 8                     | 51               | 250                   | 50                      | 6                     | 10                    | 76               | 368                   | 46                      | 8                     | 12                    |
| 2                | 58                    | 41                      | 3                     | 6                     | 27               | 164                   | 41                      | 6                     | 8                     | 52               | 250                   | 60                      | 5                     | 10                    | 77               | 375                   | 50                      | 9                     | 10                    |
| 3                | 61                    | 32                      | 4                     | 6                     | 28               | 166                   | 50                      | 4                     | 10                    | 53               | 250                   | 50                      | 5                     | 12                    | 78               | 392                   | 46                      | 10                    | 10                    |
| 4                | 69                    | 46                      | 3                     | 6                     | 29               | 167                   | 50                      | 5                     | 8                     | 54               | 266                   | 50                      | 8                     | 8                     | 79               | 395                   | 74                      | 8                     | 8                     |
| 5                | 75                    | 37 $\frac{1}{4}$        | 4                     | 6                     | 30               | 170                   | 50                      | 5                     | 10                    | 55               | 269                   | 46                      | 7                     | 10                    | 80               | 400                   | 60                      | 8                     | 10                    |
| 6                | 78                    | 39                      | 4                     | 6                     | 31               | 175                   | 37 $\frac{1}{2}$        | 7                     | 8                     | 56               | 273                   | 41                      | 8                     | 10                    | 81               | 400                   | 88                      | 7                     | 8                     |
| 7                | 82                    | 41                      | 4                     | 6                     | 32               | 182                   | 39                      | 7                     | 8                     | 57               | 276                   | 46                      | 6                     | 12                    | 82               | 400                   | 50                      | 8                     | 12                    |
| 8                | 92                    | 46                      | 4                     | 6                     | 33               | 184                   | 46                      | 6                     | 8                     | 58               | 280                   | 60                      | 7                     | 8                     | 83               | 414                   | 46                      | 9                     | 12                    |
| 9                | 94                    | 37 $\frac{1}{2}$        | 5                     | 6                     | 34               | 191                   | 41                      | 7                     | 8                     | 59               | 287                   | 41                      | 7                     | 12                    | 84               | 417                   | 50                      | 10                    | 10                    |
| 10               | 97                    | 39                      | 5                     | 6                     | 35               | 192                   | 46                      | 5                     | 10                    | 60               | 292                   | 50                      | 7                     | 10                    | 85               | 420                   | 60                      | 7                     | 12                    |
| 11               | 100                   | 50                      | 4                     | 6                     | 36               | 200                   | 37 $\frac{1}{2}$        | 8                     | 8                     | 61               | 296                   | 74                      | 6                     | 8                     | 86               | 432                   | 74                      | 7                     | 10                    |
| 12               | 100                   | 37 $\frac{1}{2}$        | 4                     | 8                     | 37               | 200                   | 60                      | 5                     | 8                     | 62               | 300                   | 60                      | 6                     | 10                    | 87               | 440                   | 88                      | 6                     | 10                    |
| 13               | 102                   | 41                      | 5                     | 6                     | 38               | 200                   | 60                      | 4                     | 10                    | 63               | 300                   | 60                      | 5                     | 12                    | 88               | 444                   | 74                      | 6                     | 12                    |
| 14               | 104                   | 39                      | 4                     | 8                     | 39               | 200                   | 50                      | 6                     | 8                     | 64               | 306                   | 46                      | 8                     | 10                    | 89               | 450                   | 60                      | 9                     | 10                    |
| 15               | 109                   | 41                      | 4                     | 8                     | 40               | 205                   | 41                      | 6                     | 10                    | 65               | 308                   | 74                      | 5                     | 10                    | 90               | 450                   | 50                      | 9                     | 12                    |
| 16               | 115                   | 46                      | 5                     | 6                     | 41               | 209                   | 50                      | 5                     | 10                    | 66               | 320                   | 60                      | 8                     | 8                     | 91               | 460                   | 46                      | 10                    | 12                    |
| 17               | 123                   | 46                      | 4                     | 8                     | 42               | 215                   | 46                      | 7                     | 8                     | 67               | 322                   | 46                      | 7                     | 12                    | 92               | 470                   | 88                      | 8                     | 8                     |
| 18               | 125                   | 50                      | 5                     | 6                     | 43               | 219                   | 41                      | 8                     | 8                     | 68               | 333                   | 50                      | 8                     | 10                    | 93               | 480                   | 60                      | 8                     | 12                    |
| 19               | 125                   | 37 $\frac{1}{2}$        | 5                     | 8                     | 44               | 230                   | 46                      | 6                     | 10                    | 69               | 345                   | 74                      | 7                     | 8                     | 94               | 493                   | 74                      | 8                     | 10                    |
| 20               | 130                   | 39                      | 5                     | 8                     | 45               | 230                   | 46                      | 5                     | 12                    | 70               | 345                   | 46                      | 9                     | 10                    | 95               | 500                   | 60                      | 10                    | 10                    |
| 21               | 134                   | 50                      | 4                     | 8                     | 46               | 233                   | 50                      | 7                     | 8                     | 71               | 350                   | 60                      | 7                     | 10                    | 96               | 500                   | 50                      | 10                    | 12                    |
| 22               | 137                   | 41                      | 5                     | 8                     | 47               | 239                   | 41                      | 7                     | 10                    | 72               | 350                   | 50                      | 7                     | 12                    | 97               | 513                   | 88                      | 7                     | 10                    |
| 23               | 150                   | 37 $\frac{1}{2}$        | 6                     | 8                     | 48               | 240                   | 60                      | 6                     | 8                     | 73               | 352                   | 88                      | 6                     | 8                     | 98               | 518                   | 74                      | 7                     | 12                    |
| 24               | 153                   | 46                      | 4                     | 10                    | 49               | 245                   | 46                      | 8                     | 8                     | 74               | 360                   | 74                      | 6                     | 10                    | 99               | 540                   | 60                      | 9                     | 12                    |
| 25               | 153                   | 46                      | 5                     | 8                     | 50               | 246                   | 41                      | 6                     | 12                    | 75               | 360                   | 60                      | 6                     | 12                    | 100              | 555                   | 74                      | 9                     | 10                    |

**NUMBER OF PIPES WIDE.**

Coils 3 pipes wide are 8 inches in width.

Coils 7 pipes wide are 18 inches in width.

“ 4 “ “ “ 10 $\frac{1}{2}$  “ “  
 “ 5 “ “ “ 13 “ “  
 “ 6 “ “ “ 15 $\frac{1}{2}$  “ “

“ 8 “ “ “ 20 $\frac{1}{2}$  “ “  
 “ 9 “ “ “ 23 “ “  
 “ 10 “ “ “ 25 $\frac{1}{2}$  “ “

**NUMBER OF PIPES HIGH.**

Coils 6 pipes high, 4 feet long or less, are.....22 inches high.

“ 8 “ “ “ “ “ “ .....27 “ “  
 “ 10 “ “ “ “ “ “ .....32 “ “  
 “ 12 “ “ “ “ “ “ .....37 “ “  
 “ 6 “ “ over 4 feet long, are.....25 “ “  
 “ 8 “ “ “ “ “ “ .....31 “ “  
 “ 10 “ “ “ “ “ “ .....37 “ “  
 “ 12 “ “ “ “ “ “ .....43 “ “



ORNAMENTAL SCREEN.

With Marble Top for Enclosing Coils.

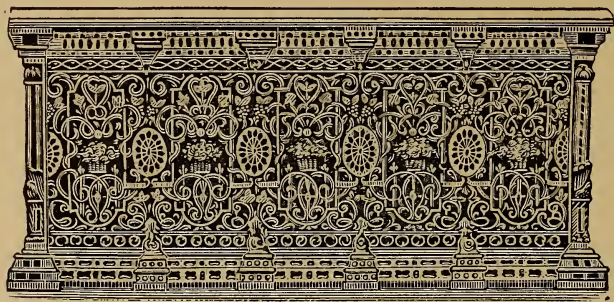


Fig. 154.

|                                                                             |                                                                      |
|-----------------------------------------------------------------------------|----------------------------------------------------------------------|
| Finished in Bronze, Chocolate or Gold, Price per foot (inside measure)..... | \$2.50                                                               |
| (Marble Slab not included in this price.)                                   |                                                                      |
| Plain Castings only, Price per pound .....                                  | .12                                                                  |
| Width of Panels .....                                                       | 4½ inches, 7 inches, 9 inches, 11 inches, 12⅞ inches and 14¾ inches. |
| “ front corner piece .....                                                  | 2 “                                                                  |
| “ back corner piece at bottom .....                                         | 3 “                                                                  |
| “ back corner piece at top .....                                            | 4 “                                                                  |
| Height under marble .....                                                   | 2 feet 8 “                                                           |

CLARK DAMPER REGULATOR.

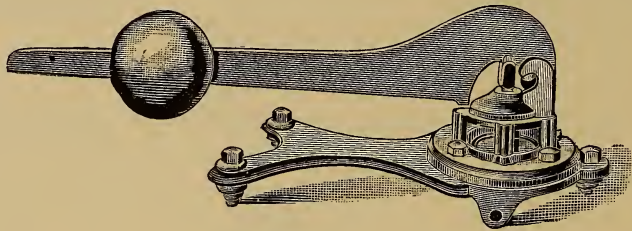


Fig. 155.

|                                                          |         |
|----------------------------------------------------------|---------|
| No. 1, for Boilers of 5 Horse-Power and under, each..... | \$10.00 |
| “ 2, “ 20 “ “ .....                                      | 15.00   |
| “ 3, “ 30 to 500 Horse-Power, each.....                  | 25.00   |

LOW PRESSURE DAMPER REGULATOR.

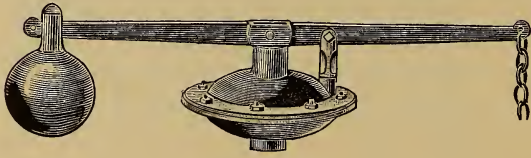


Fig. 156.

|                   |         |
|-------------------|---------|
| Price, each ..... | \$10.00 |
|-------------------|---------|

AUTOMATIC WATER FEEDER.

For High or Low Pressure.

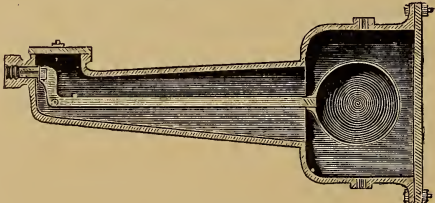


Fig. 157.

|                   |         |
|-------------------|---------|
| Price, each ..... | \$20.00 |
|-------------------|---------|

## Bradley's Insulated Air Coverings.



Fig. 158.

|                                      |        |
|--------------------------------------|--------|
| 1½, ¾, 1, 1¼, 1½ in., per linear ft. | \$0.25 |
| 2 inches, per linear ft.             | .27    |
| 2½ " " " "                           | .31    |
| 3 " " " "                            | .36    |
| 3½ " " " "                           | .40    |
| 4 " " " "                            | .44    |
| 4½ " " " "                           | .47    |
| 5 " " " "                            | .50    |
| 6 " " " "                            | .58    |
| 7 " " " "                            | .66    |
| 8 " " " "                            | .73    |
| 9 " " " "                            | .80    |
| 10 " " " "                           | .90    |
| 12 " " " "                           | 1.00   |

Coverings for Boilers, Domes, Drums and other Steam Surfaces, made specially to order, at 25 cents per square foot, surface measure.

All goods sold in sections three feet long.

There have been a vast army of compositions and combinations placed upon the market under the name of "Pipe and Boiler Coverings," but the great majority of them have been condemned after practical tests, failing either as non-conductors or in some of the important essentials of durability, finish or cost.

“Bradley’s Insulated Air Coverings” are the best in the world for the following reasons:

- (1) They combine the best non-conductors known—wool felt and confined air.
- (2) They do not powder down like hair felt, nor crack and fall off like cement.
- (3) They are unequaled for durability, and are not effected by expansion, contraction, or shaking of pipes.
- (4) They are easily put on, and can be readily removed and reapplied without damaging their effectiveness.
- (5) They are light in weight, and are not liable to injury by handling or in transportation.
- (6) They can be applied without creating any dirt or muss in the neatest of apartments.
- (7) They are the best known protector from frost and for sweating pipes.
- (8) They provide, in combination with our Elbow, Tee and Valve Coverings, the neatest and most complete, as well as the most effective line of coverings for every variety of surface that have ever been produced.

## FITTINGS.

## ELBOWS.



Fig. 159.

TEES.



Fig. 160.

## VALVES.

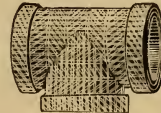


Fig. 161.

| Size, inches..... | $\frac{3}{4}$ | 1   | 1 $\frac{1}{4}$ | 1 $\frac{1}{2}$ | 2   | 2 $\frac{1}{2}$ | 3   | 3 $\frac{1}{2}$ | 4   | 4 $\frac{1}{2}$ | 5   | 6   |
|-------------------|---------------|-----|-----------------|-----------------|-----|-----------------|-----|-----------------|-----|-----------------|-----|-----|
| Elbows, each..... | .25           | .25 | .25             | .25             | .27 | .31             | .36 | .40             | .44 | .47             | .50 | .58 |
| Tees, “.....      | .33           | .33 | .33             | .33             | .36 | .41             | .48 | .53             | .59 | .63             | .67 | .77 |
| Valves, “.....    | .25           | .25 | .25             | .25             | .27 | .41             | .48 | .53             | .59 | .63             | .67 | .77 |

## CREAMER'S NEW PATENT LEVER ADJUSTABLE HOT AIR REGISTER.

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The superiority of these Registers consists in the adjustable lever movement, and the spring and screw attachment thereto, whereby they can be set permanently, if desired, in any position, making a proper distribution of heat throughout the building.

As a floor Register, where the valves are operated by the foot (as is always the case), the lever movement is unhesitatingly pronounced, by those who have seen and tried it, the best ever produced. The Registers are thoroughly well made in every respect, the valves being rabbeted and overlapping each other, making them perfectly tight when desired. There is no danger of dirt or sweepings obstructing or clogging the movement, as the lever handle increases the power three-fold. They need only to be seen to be appreciated. All sizes are manufactured of standard dimensions, to suit the regular size border frames.

NOTE.—All of our Square and Round Registers may be used as Ventilators, by the substitution of an ornamental casting, called a Spider, in place of the Knob or Shifter. To the Spider are attached the Cords. We also furnish Index Plates, showing which cord to pull, to open or close the valves. The dimensions of Registers given are the outside measurement of the box containing the valves. If the Registers are to be used as Ventilators, and placed horizontally or overhead, it should be so stated when ordering, as a different fixture is used for this purpose. If Registers are placed in Side Walls, and so ordered, we send a Knob in place of the Flat Button.

We have also made a most radical improvement in the construction of Registers, which consists in making

### THE BOXES SECTIONAL.

to hold the valves, instead of casting them all in one piece; by this plan we can make the box nearly straight instead of tapering. Again, if the box is broken in transportation or otherwise, the broken piece can be replaced with slight cost. Each side will be distinctly marked in the casting to facilitate ordering of extra pieces. We also put projecting nipples on the sides, making a firm anchorage in the plaster, which will be an immense advantage in plastering them in side walls, as there will be no danger of their coming out.

All Square and Round Registers (except Convex) may be made to lock, at an additional cost of thirty cents extra, net. This is a desirable feature for Nurseries, Public Halls and Public Buildings generally.



# NEW NOVELTY REGISTER,

FOR SIDE WALLS ONLY.

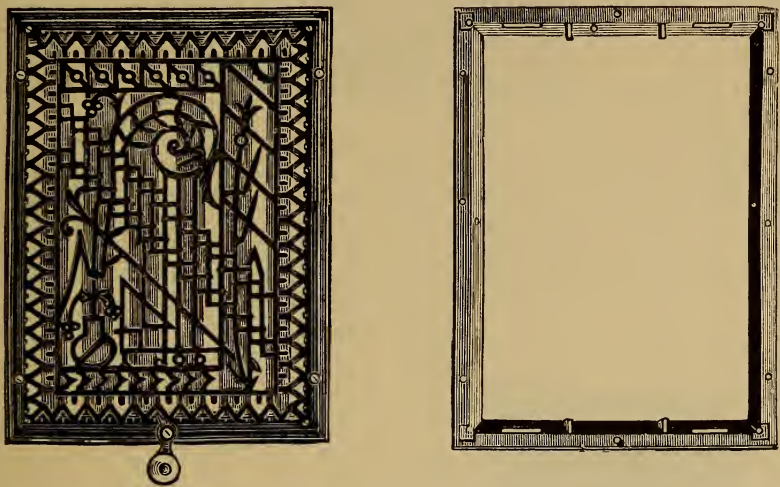


Fig. 162.

The face of this Register, projecting about an inch and a half from the wall, allows an air duct of cool air to pass in between the wall and the column of heated air, in this way preventing discoloration of the plaster (so objectionable in flat side wall Registers). They can also be used as ventilators, and worked with cords, when placed high up on side walls.

With Wall Frame to be adjusted first; and when painters and masons are through, the Register is attached by machine screws.

The Registers can be removed in a few moments for repairs.

| Size of Opening. | Black or White<br>Japanned. | Gold or Copper<br>Bronzed. | Nickel or Electro<br>Copper. | Without Valves<br>Japanned. |
|------------------|-----------------------------|----------------------------|------------------------------|-----------------------------|
| 6 x 8 .....      | \$2.00                      | \$2.50                     | \$4.10                       | \$1.40                      |
| 6 x 10 .....     | 2.30                        | 3.10                       | 4.50                         | 1.70                        |
| 8 x 10 .....     | 2.80                        | 3.60                       | 5.25                         | 2.10                        |
| 8 x 12 .....     | 3.10                        | 3.80                       | 5.60                         | 2.50                        |
| 9 x 12 .....     | 3.60                        | 4.50                       | 6.00                         | 2.70                        |
| 9 x 14 .....     | 4.00                        | 4.75                       | 6.50                         | 3.00                        |
| 10 x 12 .....    | 4.00                        | 4.75                       | 6.50                         | 3.00                        |
| 10 x 14 .....    | 4.50                        | 5.25                       | 7.25                         | 3.25                        |

## PATENT CONVEX SIDE WALL VENTILATORS AND REGISTERS.

The success of this style of new Register for Hot air and ventilating purposes demands the close attention of dealers and parties using Registers. The advantages are as follows:

1st. The design is so much more open, and the front being convex, makes the available area about equal to the whole opening of the Register.

2d. The valves all work within the front, no part of the Register going in the wall, hence the heat is thrown out in the room more effectively, and are admirably adapted to thin partitions, their being no box to obstruct the flow of air to upper chambers.

3d. When the Registers are to be placed high up and used as Ventilators, please so specify, and we will furnish a triangle-pull, with swivels, without extra charge, in place of the handle shown in cut.

4th. The important improvement recently made consists in the attachment of a flange or frame in the opening, and to this the Register is attached by machine screws. By this arrangement there is less trouble in fitting them into the wall than is met in setting the ordinary Registers. The Register itself need not be attached until the house is finished, and can be removed in five minutes, if necessary, for repairs, re-decoration or cleaning the pipes. See cut below, showing frame, etc.

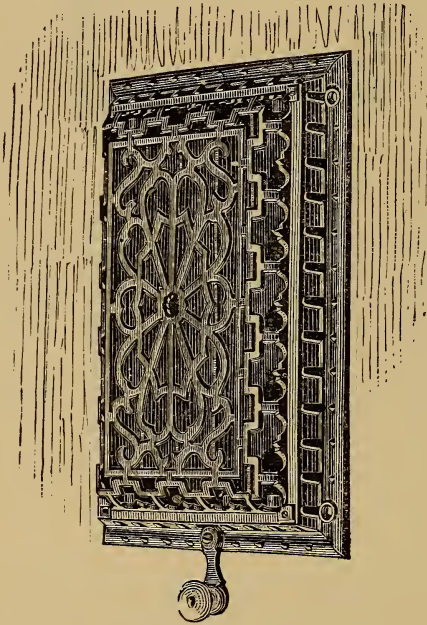
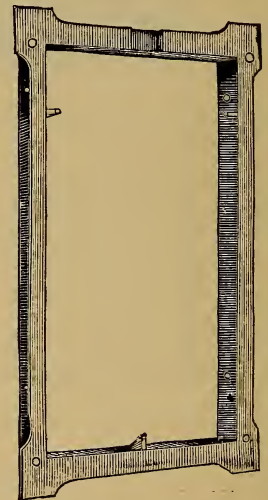


Fig. 163.



Side Wall Frame for Convex Register.

| Size of Opening. | White or Black Japanned. | Gold, Silver or Copper Bronzed. | Nickle Plated and Polished. | Faces Black or White Japanned. | Outside Dimensions over all. |
|------------------|--------------------------|---------------------------------|-----------------------------|--------------------------------|------------------------------|
| 6 x 8.....       | \$2.75                   | \$3.75                          | \$5.25                      | \$1.20                         | 8 x 10                       |
| 6 x 10.....      | 3.00                     | 4.00                            | 5.75                        | 1.25                           | 8 x 12                       |
| 8 x 10.....      | 3.50                     | 4.50                            | 6.00                        | 1.50                           | 10 x 12                      |
| 8 x 12.....      | 4.00                     | 5.00                            | 6.50                        | 1.75                           | 10 x 14                      |
| 8 x 14.....      | 4.50                     | 5.60                            | 7.00                        | 2.00                           | 9 1/4 x 15 1/2               |
| 9 x 14.....      | 5.00                     | 6.20                            | 7.50                        | 2.25                           | 11 x 16                      |
| 10 x 13.....     | 5.60                     | 6.70                            | 8.00                        | 2.50                           | 12 x 15                      |
| 10 x 16.....     | 6.25                     | 7.75                            | 9.25                        | 3.15                           | 12 x 18                      |
| 12 x 18.....     | 8.20                     | 9.50                            | 11.75                       | 4.00                           | 14 x 20                      |
| 14 x 22.....     | 11.00                    | 12.50                           | 15.50                       | 4.80                           | 16 x 24                      |

For wainscoting, these Registers make a very neat finish.

# Creamer's Patent



# Lever Registers.

Fig. 164.

| REGISTERS.       |                          |                           |                         |                           |                 | FACES.                   |                           |                |
|------------------|--------------------------|---------------------------|-------------------------|---------------------------|-----------------|--------------------------|---------------------------|----------------|
| Size of Opening. | Black or White Japanned. | White Porcelain Enameled. | Gold or Copper Bronzed. | Nickel or Electro Copper. | Without Valves. | Black or White Japanned. | White Porcelain Enameled. | Nickel Plated. |
| 4½ x 6½.....     | \$1.40                   | \$2.75                    | \$1.90                  | \$2.95                    | \$0.90          | \$0.46                   | \$1.90                    | \$2.10         |
| 4 x 8 .....      | 1.50                     | 3.00                      | 2.00                    | 3.25                      | 1.00            | .48                      | 2.00                      | 2.20           |
| 4 x 10 .....     | 1.65                     | 3.25                      | 2.18                    | 3.50                      | 1.15            | .50                      | 2.10                      | 2.30           |
| 4 x 12 .....     | 2.00                     | 3.50                      | 2.30                    | 4.00                      | 1.50            | .65                      | 2.40                      | 2.50           |
| 4 x 15 .....     | 2.30                     | 4.00                      | 2.85                    | 4.25                      | 1.60            | .75                      | 2.60                      | 2.75           |
| 4 x 16 .....     | 2.35                     | 4.25                      | 3.00                    | 4.50                      | 1.75            | .85                      | 2.75                      | 3.00           |
| 4 x 18 .....     | 2.50                     | 4.50                      | 3.10                    | 4.80                      | 1.75            | .85                      | 2.85                      | 3.20           |
| 6 x 8 .....      | 1.90                     | 3.50                      | 2.50                    | 3.75                      | 1.20            | .65                      | 2.30                      | 2.60           |
| 6 x 9 .....      | 2.00                     | 3.65                      | 2.55                    | 3.95                      | 1.30            | .68                      | 2.40                      | 2.60           |
| 6 x 10 .....     | 2.10                     | 3.80                      | 2.65                    | 4.10                      | 1.45            | .70                      | 2.50                      | 2.70           |
| 6 x 14 .....     | 2.70                     | 4.60                      | 3.25                    | 5.90                      | 1.95            | .90                      | 2.80                      | 3.10           |
| 6 x 16 .....     | 3.00                     | 5.00                      | 3.60                    | 5.40                      | 2.10            | 1.10                     | 3.20                      | 3.30           |
| 6 x 18 .....     | 3.40                     | 5.45                      | 4.10                    | 5.85                      | 2.40            | 1.35                     | 3.40                      | 3.60           |
| 6 x 24 .....     | 6.36                     | 9.50                      | 7.40                    | 10.00                     | 4.25            | 2.15                     | 5.50                      | 6.00           |
| 7 x 10 .....     | 2.30                     | 3.80                      | 2.90                    | 4.50                      | 1.60            | .75                      | 2.60                      | 2.90           |
| 8 x 8 .....      | 2.25                     | 4.20                      | 2.80                    | 4.50                      | 1.50            | .80                      | 2.75                      | 2.90           |
| 8 x 10 .....     | 2.50                     | 4.50                      | 3.10                    | 4.85                      | 1.75            | .85                      | 2.85                      | 3.10           |
| 8 x 12 .....     | 2.80                     | 4.80                      | 3.45                    | 5.20                      | 2.00            | 1.00                     | 3.00                      | 3.25           |
| 8 x 14 .....     | 3.50                     | 5.60                      | 4.15                    | 6.00                      | 2.45            | 1.30                     | 3.50                      | 3.75           |
| 8 x 15 .....     | 3.60                     | 5.75                      | 4.35                    | 6.15                      | 2.55            | 1.50                     | 3.60                      | 3.90           |
| 8 x 18 .....     | 4.20                     | 6.50                      | 5.00                    | 6.95                      | 3.05            | 1.75                     | 4.05                      | 4.60           |
| 9 x 9 .....      | 2.65                     | 4.65                      | 3.25                    | 5.00                      | 1.85            | 1.00                     | 3.00                      | 3.25           |
| 9 x 10 .....     | 3.00                     | 5.00                      | 3.75                    | 5.50                      | 2.00            | 1.12                     | 2.12                      | 3.40           |
| 9 x 12 .....     | 3.30                     | 5.30                      | 4.00                    | 5.70                      | 2.35            | 1.25                     | 3.25                      | 3.75           |
| 9 x 14 .....     | 3.60                     | 5.75                      | 4.35                    | 6.20                      | 2.55            | 1.50                     | 3.65                      | 4.00           |
| 10 x 10 .....    | 3.25                     | 5.25                      | 3.90                    | 5.65                      | 2.30            | 1.20                     | 3.20                      | 3.60           |
| 10 x 12 .....    | 3.60                     | 5.75                      | 4.35                    | 6.15                      | 2.55            | 1.50                     | 3.60                      | 4.00           |
| 10 x 14 .....    | 4.25                     | 6.40                      | 5.15                    | 6.85                      | 2.90            | 1.85                     | 4.10                      | 4.50           |
| 10 x 16 .....    | 4.75                     | 6.95                      | 5.65                    | 7.45                      | 3.25            | 2.15                     | 4.45                      | 4.90           |
| 10 x 18 .....    | 6.00                     | 8.15                      | 7.00                    | 8.65                      | 4.45            | 2.45                     | 4.85                      | 5.20           |
| 10 x 20 .....    | 6.75                     | 8.90                      | 7.80                    | 9.45                      | 5.10            | 2.80                     | 5.25                      | 5.60           |
| 10½ x 16½.....   | 5.15                     | 7.25                      | 5.00                    | 7.80                      | 3.75            | 2.25                     | 4.50                      | 4.95           |
| 12 x 12 .....    | 5.00                     | 7.10                      | 5.90                    | 7.55                      | 3.65            | 2.10                     | 4.40                      | 4.80           |
| 12 x 15 .....    | 6.00                     | 8.15                      | 7.00                    | 8.65                      | 4.45            | 2.40                     | 4.80                      | 5.20           |
| 12 x 17 .....    | 6.75                     | 8.90                      | 7.80                    | 9.45                      | 5.10            | 2.80                     | 5.25                      | 5.65           |
| 12 x 18 .....    | 7.00                     | 9.20                      | 8.15                    | 9.95                      | 5.40            | 3.00                     | 5.45                      | 5.95           |
| 12 x 19 .....    | 7.50                     | 9.60                      | 8.60                    | 10.20                     | 5.70            | 3.20                     | 5.70                      | 6.20           |
| 12 x 24 .....    | 9.75                     | 12.30                     | 10.75                   | 13.05                     | 6.50            | 3.90                     | 6.90                      | 7.50           |
| 14 x 14 .....    | 7.50                     | 9.60                      | 8.60                    | 10.20                     | 5.70            | 3.15                     | 5.65                      | 6.15           |
| 14 x 18 .....    | 8.75                     | 11.30                     | 9.85                    | 12.50                     | 6.30            | 3.50                     | 6.40                      | 7.20           |
| 14 x 22 .....    | 10.00                    | 12.75                     | 11.25                   | 13.75                     | 6.90            | 3.90                     | 7.15                      | 7.70           |
| 15 x 25 .....    | 13.00                    | 16.45                     | 15.00                   | 17.45                     | 9.25            | 6.00                     | 10.25                     | 10.85          |
| 16 x 16 .....    | 9.25                     | 11.55                     | 10.25                   | 12.30                     | 6.15            | 3.99                     | 6.65                      | 7.40           |
| 16 x 20 .....    | 10.50                    | 13.00                     | 11.40                   | 14.00                     | 7.75            | 4.95                     | 7.95                      | 8.95           |
| 16 x 24 .....    | 13.00                    | 16.65                     | 15.00                   | 17.75                     | 9.25            | 6.00                     | 10.25                     | 11.50          |
| 20 x 20 .....    | 13.50                    | 17.00                     | 15.50                   | 18.10                     | 9.65            | 6.50                     | 10.75                     | 12.00          |
| 20 x 26 .....    | 17.00                    | 22.65                     | 19.00                   | 24.90                     | 2.00            | 7.50                     | 14.50                     | 16.00          |
| 21 x 29 .....    | 20.00                    | 26.00                     | 22.25                   | 28.25                     | 14.00           | 8.20                     | 15.00                     | 16.80          |
| 27 x 27 .....    | 25.00                    | 29.75                     | .....                   | 31.75                     | 18.00           | 10.70                    | 16.00                     | 17.50          |
| 24 x 24 .....    | 20.00                    | .....                     | .....                   | 28.25                     | .....           | .....                    | .....                     | .....          |
| 24 x 32 .....    | 27.00                    | .....                     | .....                   | 28.50                     | .....           | 11.25                    | .....                     | .....          |
| 27 x 38 .....    | 33.60                    | .....                     | .....                   | 36.00                     | 24.00           | 14.00                    | .....                     | .....          |
| 30 x 30 .....    | 35.00                    | .....                     | .....                   | 38.00                     | 21.00           | 13.00                    | .....                     | .....          |

See Page 77 for exact inside and outside dimensions of Registers.



Creamer's Patent Lever Registers.—CONTINUED.

ROUND REGISTERS.

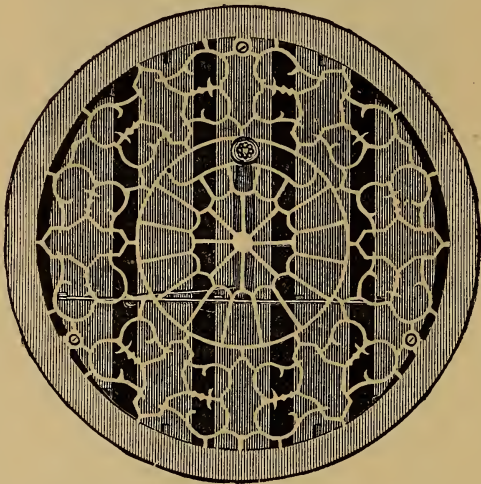


Fig. 165.

| Size of Opening.      | Best Black or White Japanned. | White Porcelain Enameled. | Gold or Copper Bronzed. | Nickel or Copper Plated. | Without Valves. | Faces White Enameled. | Faces White or Black Japanned. |
|-----------------------|-------------------------------|---------------------------|-------------------------|--------------------------|-----------------|-----------------------|--------------------------------|
| 6 inches.....         | \$1.85                        | \$3.00                    | \$1.85                  | \$3.30                   | \$0.90          | \$2.20                | \$0.50                         |
| 7 “.....              | 1.50                          | 3.20                      | 2.00                    | 3.50                     | 1.00            | 2.30                  | .60                            |
| 8 “.....              | 1.85                          | 3.50                      | 2.30                    | 3.85                     | 1.15            | 2.35                  | .65                            |
| 9 “.....              | 2.25                          | 4.00                      | 2.80                    | 4.60                     | 1.45            | 2.75                  | .85                            |
| 10 “.....             | 2.75                          | 4.50                      | 3.35                    | 5.15                     | 1.70            | 2.90                  | 1.00                           |
| 12 “.....             | 3.60                          | 5.50                      | 4.30                    | 6.25                     | 2.20            | 3.40                  | 1.30                           |
| 14 “.....             | 5.40                          | 7.65                      | 6.10                    | 8.15                     | 3.10            | 4.25                  | 2.00                           |
| 16 “.....             | 7.00                          | 9.50                      | 7.75                    | 10.00                    | 4.15            | 5.20                  | 2.70                           |
| 18 “.....             | 9.25                          | 11.75                     | 10.00                   | 12.35                    | 5.30            | 5.95                  | 3.45                           |
| 20 “.....             | 11.50                         | 12.50                     | 12.50                   | 15.20                    | 7.35            | 7.15                  | 4.15                           |
| 24 “.....             | 15.50                         | 17.00                     | 17.00                   | 22.20                    | 10.95           | 10.45                 | 6.45                           |
| 48 “ Extra Heavy..... | 70.00                         |                           |                         |                          |                 |                       | 30.00                          |

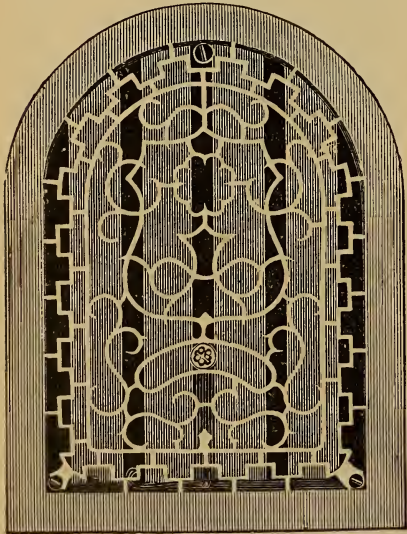


Fig. 166.

CIRCULAR TOP REGISTERS.

| Size of Opening. |         | Black or White Japanned. | White Enameled. | Gold or Copper Bronzed. | Nickel or Copper Plated. | Register Face Japanned. | Register Face Enameled. |
|------------------|---------|--------------------------|-----------------|-------------------------|--------------------------|-------------------------|-------------------------|
| Width.           | Height. |                          |                 |                         |                          |                         |                         |
| 7                | x 10    | \$2.25                   | \$4.25          | \$2.85                  | \$4.50                   | \$0.90                  | \$2.60                  |
| 8                | x 12    | 2.95                     | 5.00            | 3.60                    | 5.35                     | 1.15                    | 3.20                    |
| 8                | x 14    | 3.40                     | 5.40            | 4.10                    | 5.75                     | 1.30                    | 3.30                    |
| 9                | x 12    | 3.40                     | 5.40            | 4.10                    | 5.75                     | 1.30                    | 3.30                    |
| 10               | x 14    | 4.10                     | 6.30            | 4.90                    | 6.70                     | 1.75                    | 3.95                    |
| 11               | x 16    | 4.60                     | 7.00            | 5.40                    | 7.40                     | 1.90                    | 4.30                    |
| 12               | x 17    | 5.20                     | 8.00            | 6.05                    | 8.50                     | 2.00                    | 4.80                    |
| 11               | x 13    | 3.55                     | 5.75            | 4.35                    | 6.15                     | 1.55                    | 3.75                    |
| 13               | x 15    | 4.60                     | 7.00            | 5.45                    | 7.45                     | 1.75                    | 4.15                    |
| 16               | x 17    | 6.50                     | 9.25            | 7.50                    | 9.85                     | 2.50                    | 5.25                    |
| 13               | x 11    | 3.55                     | 5.75            | 4.35                    | 6.15                     | 1.55                    | 3.75                    |
| 15               | x 13    | 4.60                     | 7.00            | 5.45                    | 7.45                     | 1.75                    | 4.15                    |
| 17               | x 16    | 6.50                     | 9.25            | 7.50                    | 9.85                     | 2.50                    | 5.25                    |

## IRON BORDER FRAMES.

| Size for Register Opening. | Black<br>Japanned. | White<br>Porcelain<br>Enameled. | Gold<br>Bronzed. | Nickel<br>Plated. |
|----------------------------|--------------------|---------------------------------|------------------|-------------------|
| 4½ x 6½                    |                    |                                 |                  |                   |
| 4 x 8                      |                    |                                 |                  |                   |
| 4 x 10                     |                    |                                 |                  |                   |
| 4 x 12                     |                    |                                 |                  |                   |
| 4 x 15                     |                    |                                 |                  |                   |
| 4 x 16                     |                    |                                 |                  |                   |
| 4 x 13                     |                    |                                 |                  |                   |
| 6 x 8                      | \$1.15             | \$2.50                          | \$1.35           | \$2.80            |
| 6 x 9                      | 1.20               | 2.60                            | 1.40             | 2.90              |
| 6 x 10                     | 1.25               | 2.70                            | 1.50             | 3.00              |
| 6 x 14                     | 1.45               | 3.10                            | 1.80             | 3.40              |
| 6 x 16                     | 1.55               | 3.28                            | 1.90             | 3.60              |
| 6 x 18                     | 1.75               | 3.45                            | 2.10             | 3.80              |
| 6 x 24                     | 2.50               | 5.00                            | 3.00             | 5.50              |
| 7 x 10                     | 1.30               | 3.05                            | 1.50             | 3.40              |
| 8 x 8                      | 1.30               | 3.00                            | 1.55             | 3.30              |
| 8 x 10                     | 1.40               | 3.15                            | 1.65             | 3.50              |
| 8 x 12                     | 1.50               | 3.25                            | 1.80             | 3.60              |
| 8 x 14                     | 1.65               | 3.55                            | 1.95             | 3.90              |
| 8 x 15                     | 1.80               | 3.60                            | 2.15             | 4.50              |
| 8 x 18                     | 2.00               | 4.00                            | 2.40             | 5.00              |
| 9 x 9                      | 1.40               | 3.15                            | 1.65             | 3.50              |
| 9 x 10                     | 1.25               | 3.25                            | 1.75             | 3.60              |
| 9 x 12                     | 1.55               | 3.35                            | 1.95             | 3.70              |
| 9 x 14                     | 1.65               | 3.55                            | 2.05             | 4.10              |
| 10 x 10                    | 1.70               | 3.30                            | 2.10             | 3.70              |
| 10 x 12                    | 1.80               | 3.60                            | 2.15             | 4.05              |
| 10 x 14                    | 1.90               | 3.75                            | 2.30             | 4.40              |
| 10 x 16                    | 2.00               | 3.90                            | 2.50             | 4.75              |
| 10½ x 16½                  | 2.10               | 4.00                            | 2.60             | 4.90              |
| 12 x 12                    | 2.00               | 3.90                            | 2.50             | 4.50              |
| 12 x 15                    | 2.40               | 4.15                            | 2.90             | 4.35              |
| 12 x 17                    | 2.60               | 4.50                            | 3.10             | 5.65              |
| 12 x 18                    | 2.70               | 4.60                            | 3.25             | 5.80              |
| 12 x 19                    | 2.80               | 4.90                            | 3.40             | 6.00              |
| 12 x 24                    | 3.35               | 6.00                            | 4.00             | 7.40              |
| 14 x 14                    | 2.65               | 4.80                            | 3.15             | 6.00              |
| 14 x 18                    | 3.15               | 5.55                            | 3.70             | 7.00              |
| 14 x 22                    | 3.70               | 7.25                            | 4.35             | 8.00              |
| 15 x 25                    | 4.25               | 9.00                            | 5.20             | 10.00             |
| 16 x 16                    | 3.40               | 6.00                            | 4.25             | 7.00              |
| 16 x 20                    | 3.80               | 7.25                            | 4.65             | 7.95              |
| 16 x 24                    | 4.35               | 9.00                            | 5.20             | 9.75              |
| 20 x 20                    | 4.75               | 9.25                            | 5.65             | 10.40             |
| 20 x 26                    | 6.75               | 13.30                           | 8.00             | 15.55             |
| 21 x 29                    | 7.00               | 14.00                           | 8.25             |                   |
| 27 x 27                    | 7.50               |                                 | 9.00             |                   |
| 24 x 32                    | 7.75               |                                 | 9.25             |                   |
| 27 x 38                    | 8.75               |                                 | 10.25            |                   |
| 30 x 30                    | 8.00               |                                 | 9.50             |                   |

## IRON ROUND BORDER FRAMES.

| Size of Opening. | Nickel or<br>Copper Plated. | White<br>Porcelain<br>Enameled. | Gold or<br>Copper<br>Bronzed. | Black<br>Japanned. |
|------------------|-----------------------------|---------------------------------|-------------------------------|--------------------|
| 6                | \$2.95                      | \$2.45                          | \$1.20                        | \$1.00             |
| 7                | 3.15                        | 2.60                            | 1.30                          | 1.10               |
| 8                | 3.25                        | 2.75                            | 1.40                          | 1.20               |
| 9                | 3.55                        | 3.00                            | 1.55                          | 1.30               |
| 10               | 3.80                        | 3.30                            | 1.70                          | 1.40               |
| 12               | 4.30                        | 3.70                            | 2.05                          | 1.80               |
| 14               | 5.00                        | 4.20                            | 2.65                          | 2.25               |
| 16               | 6.00                        | 5.50                            | 3.50                          | 3.00               |
| 18               | 7.35                        | 7.00                            | 4.55                          | 4.00               |
| 20               | 4.60                        | 9.00                            | 5.50                          | 5.00               |
| 24               |                             |                                 | 8.60                          | 6.50               |

**ROUND VENTILATING REGISTERS.**

Two Valves, for use with Cords only.

| Size, inches.....            | 5    | 6    | 7    | 8    | 9    |
|------------------------------|------|------|------|------|------|
| Black or White Japanned..... | 1.00 | 1.25 | 1.30 | 1.70 | 2.00 |

**ICE HOUSE OR CELLAR VENTILATING REGISTERS.**

With Lever Movements.

These are sectional square boxes, without faces. Other sizes can be furnished if desired. 10 x 10, 90 cts.; 10 x 20, \$1.60.

**STOVE PIPE VENTILATORS.**

These are open work screens with tins to spring them in. They are a most desirable substitute for a tight cover when the stoves are not in use, and act as Ventilators also.

| Size, inches.....                            | 4½   | 5    | 5½   | 6    | 7    |
|----------------------------------------------|------|------|------|------|------|
| Gold Bronze or White Japanned, per doz. .... | 2.50 | 2.80 | 3.00 | 3.25 | 3.50 |

**SMOKE PIPE REGISTERS.**

The sizes are for the opening for a Smoke Pipe through the body of the Register.

| Size, inches .....  | 6    | 7    | 8    | 9    |
|---------------------|------|------|------|------|
| Black Japanned..... | 3.00 | 3.00 | 3.00 | 3 00 |
| Iron Border.....    | 2.50 | 2 50 | 2.50 | 2.50 |

Ornamental Plate for finish on ceiling below, \$2.00 each.

**ROUND REVOLVING REGISTERS.**

| Size, inches .....  | 10   | 12   | 14   | 16   |
|---------------------|------|------|------|------|
| Black Japanned..... | 1.45 | 1.95 | 3.00 | 4.00 |

**CEILING VENTILATORS.**

For Churches and Large Halls.

| Size, inches.....                   | 24   | 30    | 36    | 48    | 60    |
|-------------------------------------|------|-------|-------|-------|-------|
| Painted and Tipped with Bronze..... | 7.00 | 10.50 | 14.00 | 25.00 | 35.00 |

**ORNAMENTAL PEDESTAL REGISTERS.**

With Valves, White Marble Top, O. G. Edges.

| Size, inches.....                  | 16 x 16 | 16 x 21 | 21 x 21 |
|------------------------------------|---------|---------|---------|
| Gold Bronzed .....                 | 23.50   | 29.00   | 36.00   |
| Chocolate, Tipped with Bronze..... | 21.50   | 26.50   | 33.00   |

All Flat Registers can be made to work with cords or rods, and will go lengthways or upright; the latter position always looks the best. They can be placed in ceilings also. It is best to give the position of the Register when ordering ventilating attachments.



## Dimensions of Registers.

| Size as Given on List. | Opening<br>to admit Body<br>of Register. | Extreme<br>Dimensions of Reg-<br>ister Face. | Opening<br>to admit Iron<br>Border. |
|------------------------|------------------------------------------|----------------------------------------------|-------------------------------------|
| 4½ x 6½                | 4⅝ x 6⅝                                  | 5¾ x 7⅝                                      | .....                               |
| 4 x 8                  | 4 x 8                                    | 5½ x 9½                                      | .....                               |
| 4 x 10                 | 4 x 10                                   | 5¾ x 11¾                                     | .....                               |
| 4 x 12                 | 4 x 12                                   | 5⅝ x 14                                      | .....                               |
| 4 x 15                 | 4 x 15                                   | 5⅝ x 16⅞                                     | .....                               |
| 4 x 16                 | 4 x 16                                   | 5⅝ x 17¾                                     | .....                               |
| 4 x 18                 | 4 x 17⅝                                  | 5⅝ x 19¼                                     | .....                               |
| 6 x 8                  | 6⅞ x 8⅞                                  | 7¾ x 9¾                                      | 10½ x 12½                           |
| 6 x 9                  | 6¼ x 9                                   | 7⅞ x 10¾                                     | 10½ x 13½                           |
| 6 x 10                 | 6⅞ x 10                                  | 7⅞ x 12                                      | 10½ x 14¾                           |
| 6 x 14                 | 6⅞ x 13⅞                                 | 8 x 15⅝                                      | 10⅝ x 18¼                           |
| 6 x 16                 | 6⅞ x 16                                  | 8 x 17⅞                                      | 11⅝ x 21¼                           |
| 6 x 18                 | 6 x 18                                   | 8 x 20                                       | 10¾ x 23                            |
| 6 x 24                 | 6⅞ x 24¼                                 | 8 x 26                                       | 10⅝ x 28¾                           |
| 7 x 10                 | 7 x 10                                   | 8¾ x 11¾                                     | 11⅝ x 14⅞                           |
| 8 x 8                  | 8 x 8                                    | 9⅞ x 9⅞                                      | 12⅝ x 12⅝                           |
| 8 x 10                 | 8 x 10                                   | 9⅝ x 11⅝                                     | 13 x 15                             |
| 8 x 12                 | 8 x 12                                   | 9¾ x 13⅝                                     | 13 x 16¾                            |
| 8 x 14                 | 8¼ x 14                                  | 9⅞ x 15¾                                     | 13 x 18⅞                            |
| 8 x 15                 | 8 x 15                                   | 9¾ x 16⅝                                     | 13 x 19¾                            |
| 8 x 18                 | 8 x 18                                   | 9¾ x 19½                                     | 13 x 22¾                            |
| 9 x 9                  | 9⅞ x 9⅞                                  | 10¾ x 10¾                                    | 13¾ x 13¾                           |
| 9 x 10                 | 9 x 10⅞                                  | 10¾ x 11¾                                    | 14 x 15⅞                            |
| 9 x 12                 | 9 x 12⅞                                  | 10¾ x 13¾                                    | 14¼ x 17¼                           |
| 9 x 14                 | 9 x 14                                   | 11 x 16                                      | 14⅞ x 19¼                           |
| 10 x 10                | 10¼ x 10¼                                | 12 x 12                                      | 15 x 15                             |
| 10 x 12                | 10 x 12                                  | 11¾ x 13⅞                                    | 15 x 17                             |
| 10 x 14                | 10⅞ x 14⅞                                | 12¼ x 16⅞                                    | 15⅝ x 19⅞                           |
| 10 x 16                | 10 x 16                                  | 12 x 18                                      | 15⅝ x 21½                           |
| 10½ x 16½              | 10¾ x 16⅝                                | 12⅝ x 18½                                    | 16¼ x 22⅞                           |
| 10 x 18                | 10 x 18                                  | 12 x 20⅞                                     | 14⅞ x 22¾                           |
| 12 x 12                | 12 x 12                                  | 14 x 14                                      | 17⅝ x 17⅞                           |
| 12 x 15                | 12⅞ x 15¼                                | 13½ x 16¾                                    | 16⅝ x 19⅞                           |
| 12 x 17                | 12¼ x 17¼                                | 14 x 19                                      | 17⅞ x 22⅞                           |
| 12 x 18                | 12¼ x 18                                 | 14 x 19¾                                     | 17 x 23                             |
| 12 x 19                | 12⅞ x 19¼                                | 14⅞ x 21                                     | 17½ x 24¼                           |
| 12 x 24                | 12 x 24                                  | 13⅞ x 25¾                                    | 17¼ x 29½                           |
| 14 x 14                | 14¼ x 14¼                                | 16⅝ x 16⅝                                    | 20½ x 20½                           |
| 14 x 18                | 14 x 18¼                                 | 16½ x 20¼                                    | 20½ x 24                            |
| 14 x 22                | 14¼ x 22                                 | 16½ x 24⅞                                    | 20¼ x 27¾                           |
| 15 x 25                | 15⅝ x 25½                                | 17⅞ x 27¾                                    | 22 x 32                             |
| 16 x 16                | 16 x 16                                  | 18⅞ x 18⅞                                    | 22 x 22                             |
| 16 x 20                | 16⅞ x 20½                                | 17⅞ x 22⅞                                    | 21¼ x 25½                           |
| 16 x 24                | 16⅞ x 24½                                | 18⅞ x 27                                     | 22 x 30½                            |
| 20 x 20                | 20¼ x 20¼                                | 22¼ x 22¼                                    | 26¾ x 26¾                           |
| 20 x 24                | 20 x 24                                  | 22¼ x 26                                     | 26 x 29¾                            |
| 20 x 26                | 20¼ x 26¼                                | 22⅞ x 28⅞                                    | 27¼ x 33¼                           |
| 21 x 29                | 20¾ x 29                                 | 23⅞ x 31½                                    | 28 x 36                             |
| 24 x 24                | 24 x 24                                  | 26¼ x 26¼                                    | 31 x 31                             |
| 27 x 27                | 27 x 27                                  | 29⅞ x 29⅞                                    | 34 x 34                             |
| 27 x 38                | 27 x 38                                  | 29¼ x 40¼                                    | 34 x 45                             |
| 30 x 30                | 30¼ x 30¼                                | 32¾ x 32¾                                    | 37¾ x 37¾                           |

## PLUMBERS' BRASS GOODS.

## PLAIN BIBBS.

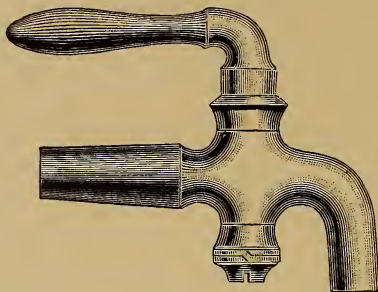


Fig. 167.

| Size, inches.....             | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2      |
|-------------------------------|---------------|---------------|---------------|---------------|---------------|-------|----------------|----------------|--------|
| Price, Finished, per doz..... | 10.00         | 12.00         | 15.00         | 18.00         | 24.00         | 36.00 | 60.00          | 84.00          | 170.00 |
| “ Nickel Plated, per doz..... | 12.00         | 14.00         | 17.50         | 20.50         | 26.50         | 39.00 | .....          | .....          | .....  |
| “ Silver Plated, per doz..... | 17.00         | 20.00         | 24.00         | 30.00         | 39.00         | 62.00 | .....          | .....          | .....  |

## HOSE BIBBS.

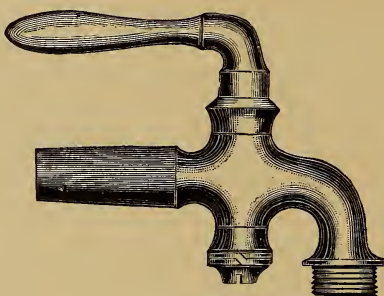


Fig. 168.

| Size, inches.....             | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2      |
|-------------------------------|---------------|---------------|---------------|-------|----------------|----------------|--------|
| Price, Finished, per doz..... | 16.00         | 19.00         | 26.00         | 39.00 | 64.00          | 90.00          | 180.00 |
| “ Nickel Plated, per doz..... | 18.50         | 21.50         | 28.50         | 42.00 | .....          | .....          | .....  |
| “ Silver Plated, per doz..... | 25.00         | 31.00         | 41.00         | 65.00 | .....          | .....          | .....  |

## PLAIN BIBBS, FOR IRON PIPE.

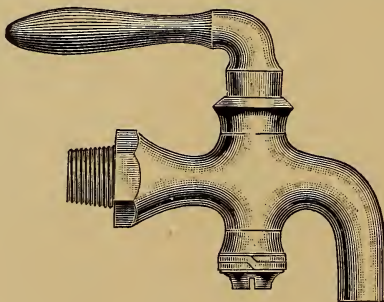


Fig. 169.

| Size, inches.....             | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2      |
|-------------------------------|---------------|---------------|---------------|---------------|---------------|-------|----------------|----------------|--------|
| Price, Finished, per doz..... | 11.00         | 13.00         | 16.00         | 19.00         | 26.00         | 39.00 | 64.00          | 90.00          | 180.00 |
| “ Nickel Plated, per doz..... | 13.00         | 15.00         | 18.50         | 21.50         | 28.50         | 42.00 | .....          | .....          | .....  |
| “ Silver Plated, per doz..... | 18.00         | 21.00         | 25.00         | 31.00         | 41.00         | 65.00 | .....          | .....          | .....  |
| “ Rough, per doz.....         | 10.00         | 12.00         | 15.00         | 17.00         | 23.00         | 35.00 | 56.00          | 78.00          | 160.00 |

HOSE BIBBS, FOR IRON PIPE.

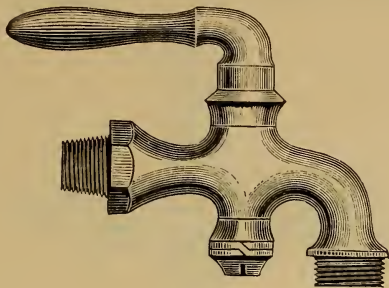


Fig. 170.

| Size, inches. ....                  | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2      |
|-------------------------------------|---------------|---------------|---------------|-------|----------------|----------------|--------|
| Price, Finished, per doz. ....      | 17.00         | 20.00         | 28.00         | 42.00 | 68.00          | 96.00          | 190.00 |
| Price, Nickel Plated, per doz. .... | 19.50         | 22.50         | 30.50         | 45.00 | .....          | .....          | .....  |
| Price, Silver Plated, per doz. .... | 26.00         | 32.00         | 43.00         | 68.00 | .....          | .....          | .....  |
| Price, Rough, per doz. ....         | 16.00         | 18.00         | 25.00         | 38.00 | 60.00          | 84.00          | 170.00 |

PLAIN BIBB, FLANGE AND THIMBLE.

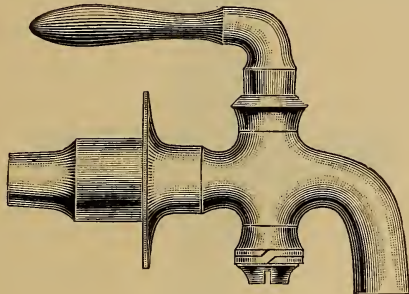


Fig. 171.

| Size, inches. ....                         | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1       |
|--------------------------------------------|---------------|---------------|---------------|---------------|---------|
| Price, Finished, per doz. ....             | \$19.00       | \$24.00       | \$28.00       | \$40.00       | \$53.00 |
| Price, Nickel Plated, per doz. ....        | 22.00         | 27.50         | 31.50         | 44.00         | 57.00   |
| Price, Silver Plated, per doz. ....        | 28.00         | 36.00         | 43.00         | 58.00         | 81.00   |
| Price, Add if with Hose End, per doz. .... | .....         | 1.00          | 1.00          | 2.00          | 3.00    |

PLAIN BIBB, SCREWED FOR WOOD.

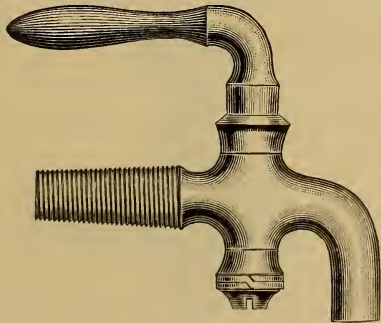


Fig. 172.

| Size, inches. ....                  | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2      |
|-------------------------------------|---------------|---------------|---------------|---------------|---------------|-------|----------------|----------------|--------|
| Price, Plain, per doz. ....         | 11.00         | 13.50         | 17.00         | 20.00         | 27.00         | 41.00 | 68.00          | 94.00          | 195.00 |
| Price, Nickel Plated, per doz. .... | 13.00         | 15.50         | 19.50         | 22.50         | 29.50         | 44.00 | .....          | .....          | .....  |
| Price, Silver Plated, per doz. .... | 18.00         | 21.50         | 26.00         | 32.00         | 42.00         | 67.00 | .....          | .....          | .....  |



ROUGH STOP, T HANDLE, RIVET.

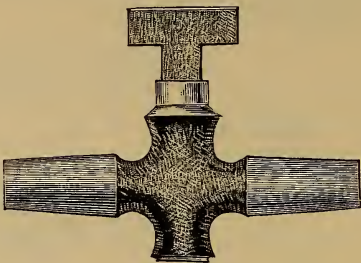


Fig. 173.

| Size, inches .....                         | 1/4  | 3/8  | 1/2   | 5/8   | 3/4   | 1     | 1 1/4 | 1 1/2 | 2      |
|--------------------------------------------|------|------|-------|-------|-------|-------|-------|-------|--------|
| Price, Plain, per doz. ....                | 6.50 | 8.50 | 11.50 | 14.50 | 18.50 | 27.00 | 45 00 | 62.00 | 105.00 |
| Price, with Check and Waste, per doz. .... | 7.50 | 9.50 | 12 50 | 15.50 | 20.00 | 29.00 | 48.00 | 66.00 | 115.00 |

ROUGH STOP, T HANDLE, NUT AND WASHER.

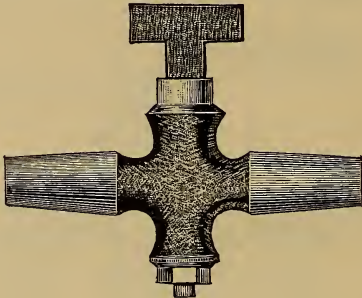


Fig. 174.

| Size, inches .....                         | 1/4  | 3/8   | 1/2   | 5/8   | 3/4   | 1     | 1 1/4 | 1 1/2 | 2      |
|--------------------------------------------|------|-------|-------|-------|-------|-------|-------|-------|--------|
| Price, Plain, per doz. . . . .             | 7.00 | 9.00  | 12.00 | 15.00 | 19.00 | 28.00 | 46.00 | 64.00 | 110.00 |
| Price, with Check and Waste, per doz. .... | 8.00 | 10.00 | 13.00 | 16.00 | 20.50 | 30.00 | 49.00 | 68.00 | 120.00 |

ROUGH STOP, T HANDLE, NUT AND WASHER.

For Lead and Iron Pipe.

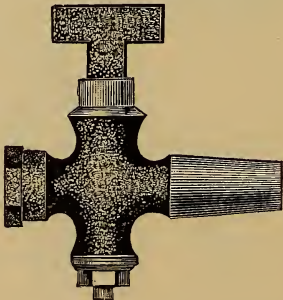


Fig. 175.

| Size, inches .....                         | 1/4  | 3/8   | 1/2   | 5/8   | 3/4   | 1     | 1 1/4 | 1 1/2 | 2      |
|--------------------------------------------|------|-------|-------|-------|-------|-------|-------|-------|--------|
| Price, Plain, per doz. ....                | 7.50 | 9.50  | 12.50 | 16.00 | 20.00 | 29.50 | 48.00 | 67.00 | 115.00 |
| Price, with Check and Waste, per doz. .... | 8.50 | 10.50 | 13.50 | 17.00 | 21.50 | 31.50 | 51.00 | 71.00 | 125.00 |

## Rough Stop, T Handle, Rivet, for Lead and Iron Pipe.

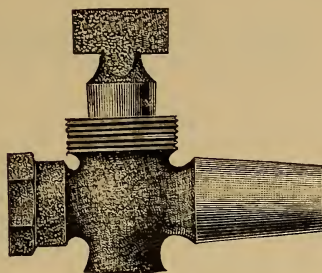


Fig. 176.

| Size, inches.....                     | $\frac{1}{2}$ | $\frac{3}{8}$ | $\frac{3}{4}$ | 1     | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2      |
|---------------------------------------|---------------|---------------|---------------|-------|----------------|----------------|--------|
| Price, per doz. ....                  | 13.50         | 17.50         | 21.50         | 32.00 | 54.00          | 78.00          | 130.00 |
| Add for Nut and washer, per doz ..... | .50           | .50           | .50           | 1.00  | 1.00           | 2.00           | 5.00   |

## Rough Stop, T Handle, Nut and Washer, Screwed for Iron Pipe.

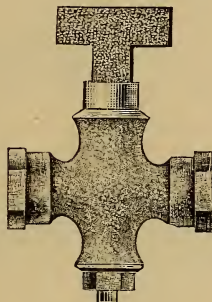


Fig. 177.

| Size, inches .....                         | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2      |
|--------------------------------------------|---------------|---------------|---------------|---------------|---------------|-------|----------------|----------------|--------|
| Price, Plain, per doz.....                 | 8.00          | 10.00         | 13.00         | 17.00         | 21.00         | 31.00 | 50.00          | 70.00          | 120.00 |
| Price, with Check and Waste, per doz. .... | 9.00          | 11.00         | 14.00         | 18.00         | 22.50         | 33.00 | 53.00          | 74.00          | 130.00 |

## Rough Stop, T Handle, Nut and Washer, Screwed Outside and Inside, for Iron Pipe.

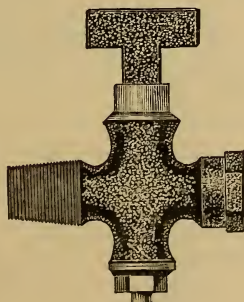


Fig. 178.

| Size, inches.....                         | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2      |
|-------------------------------------------|---------------|---------------|---------------|---------------|---------------|-------|----------------|----------------|--------|
| Price, Plain, per doz.....                | 7.50          | 9.50          | 12.50         | 16.00         | 20.00         | 29.50 | 48.00          | 67.00          | 115.00 |
| Price, with Check and Waste, per doz..... | 8.50          | 10.50         | 13.50         | 17.00         | 21.50         | 31.50 | 51.00          | 71.00          | 125.00 |

ROUGH STOP, LEVER HANDLE.

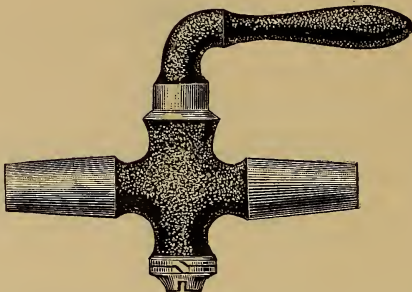


Fig. 179.

| Size, inches.....                         | 1/4    | 3/8   | 1/2   | 5/8   | 3/4   | 1     | 1 1/4 | 1 1/2 | 2      |
|-------------------------------------------|--------|-------|-------|-------|-------|-------|-------|-------|--------|
| Price, Plain, per doz.....                | \$7.00 | 9.00  | 12.00 | 15.00 | 19.00 | 28.00 | 46.00 | 64.00 | 110.00 |
| Price, with Check and Waste, per doz..... | 8.00   | 10.00 | 13.00 | 16.00 | 20.50 | 30.00 | 49.00 | 68.00 | 120.00 |

ROUGH STOP, LEVER HANDLE. FOR LEAD AND IRON PIPE.

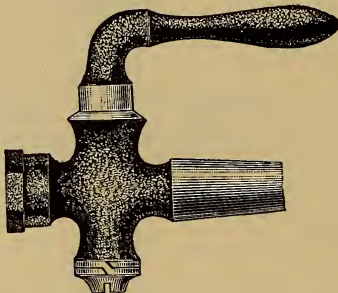


Fig. 180.

| Size, inches.....                         | 1/4    | 3/8   | 1/2   | 5/8   | 3/4   | 1     | 1 1/4 | 1 1/2 | 2      |
|-------------------------------------------|--------|-------|-------|-------|-------|-------|-------|-------|--------|
| Price, Plain, per doz.....                | \$7.50 | 9.50  | 12.50 | 16.00 | 20.00 | 29.50 | 48.00 | 67.00 | 115.00 |
| Price, with Check and Waste, per doz..... | 8.50   | 10.50 | 13.50 | 17.00 | 21.50 | 31.50 | 51.00 | 71.00 | 125.00 |

ROUGH STOP, LEVER HANDLE, SCREWED FOR IRON PIPE.

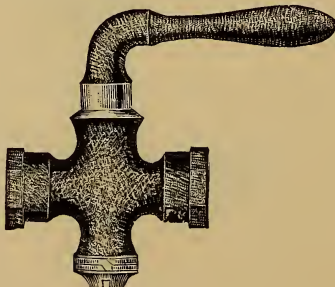


Fig. 181.

| Size, inches.....                         | 1/4    | 3/8   | 1/2   | 5/8   | 3/4   | 1     | 1 1/4 | 1 1/2 | 2      |
|-------------------------------------------|--------|-------|-------|-------|-------|-------|-------|-------|--------|
| Price, Plain, per doz.....                | \$8 00 | 10.00 | 13.00 | 17.00 | 21.00 | 31.00 | 50.00 | 70.00 | 120.00 |
| Price, with Check and Waste, per doz..... | 9.00   | 11.00 | 14.00 | 18.00 | 22.50 | 33.00 | 53.00 | 74.00 | 130.00 |



## Rough Stop, Lever Handle, Screwed Inside and Outside for Iron Pipe.

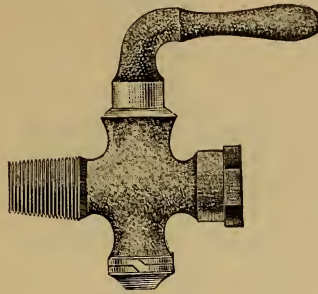


Fig. 182.

| Size, inches .....                         | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2      |
|--------------------------------------------|---------------|---------------|---------------|---------------|---------------|-------|----------------|----------------|--------|
| Price, Plain, per doz. ....                | \$7.50        | 9.50          | 12.50         | 16.00         | 20.00         | 29.50 | 48.00          | 67.00          | 115.00 |
| Price, with Check and Waste, per doz. .... | 8.50          | 10.50         | 13.50         | 17.00         | 21.50         | 31.50 | 51.00          | 71.00          | 125.00 |

## ROUGH STOP, T HANDLE, ROUND WAY, NUT AND WASHER.

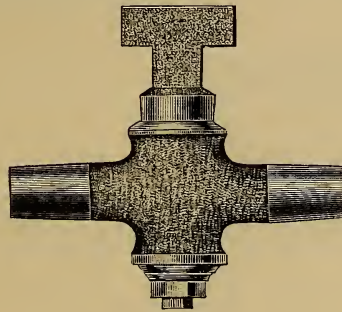


Fig. 183.

| Size, inches.....                          | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2      |
|--------------------------------------------|---------------|---------------|---------------|---------------|-------|----------------|----------------|--------|
| Price, Plain, per doz. ....                | 15.00         | 17.00         | 20.00         | 25.00         | 44.00 | 70.00          | 100.00         | 180.00 |
| Price, with Check and Waste, per doz. .... | 16.00         | 18.00         | 21.00         | 26.50         | 46.00 | 73.00          | 104.00         | 190.00 |

## Rough Stop, T Handle, Round Way, Nut and Washer, for Lead and Iron Pipe.

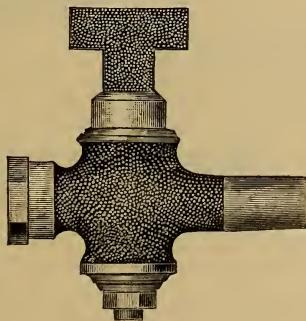


Fig. 184.

| Size, inches.....                          | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2      |
|--------------------------------------------|---------------|---------------|---------------|---------------|-------|----------------|----------------|--------|
| Price, Plain, per dozen. ....              | 15.50         | 17.50         | 21.00         | 26.00         | 45.50 | 72.00          | 103.00         | 185.00 |
| Price, with Check and Waste, per doz. .... | 16.50         | 18.50         | 22.00         | 27.50         | 47.50 | 75.00          | 107.00         | 195.00 |

# Rough Stop, T Handle, Round Way, Nut and Washer, Screwed for Iron Pipe.

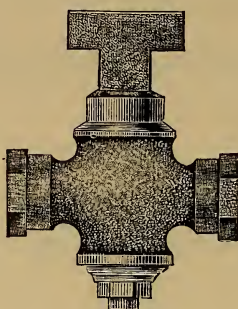


Fig. 185.

| Size, inches.....                          | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2      |
|--------------------------------------------|---------------|---------------|---------------|---------------|-------|----------------|----------------|--------|
| Price, Plain, per doz.....                 | 16.00         | 18.00         | 23.50         | 27.00         | 47.00 | 74.00          | 106.00         | 190.00 |
| Price, with Check and Waste, per doz. .... | 17.00         | 19.00         | 24.50         | 28.50         | 49.00 | 77.00          | 110.00         | 200.00 |

## ROUGH STOP, LEVER HANDLE, ROUND WAY.

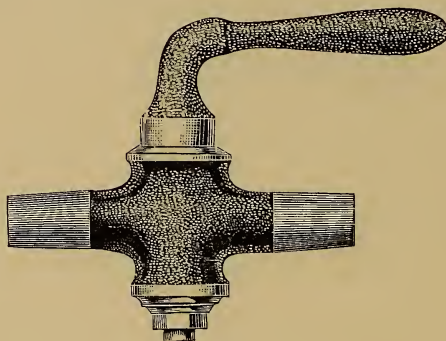


Fig. 186.

| Size, inches.....                          | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2      |
|--------------------------------------------|---------------|---------------|---------------|---------------|-------|----------------|----------------|--------|
| Price, Plain, per doz.....                 | 15.00         | 17.00         | 20.00         | 25.00         | 44.00 | 70.00          | 100.00         | 180.00 |
| Price, with Check and Waste, per doz. .... | 16.00         | 18.00         | 21.00         | 26.50         | 46.00 | 73.00          | 104.00         | 190.00 |

## Rough Stop, Lever Handle, Round Way, for Lead and Iron Pipe.

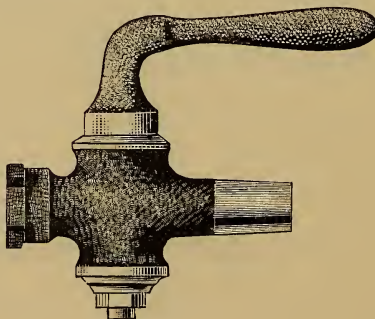


Fig. 187.

| Size, inches.....                          | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2      |
|--------------------------------------------|---------------|---------------|---------------|---------------|-------|----------------|----------------|--------|
| Price, Plain, per doz.....                 | 15.50         | 17.50         | 21.00         | 26.00         | 45.50 | 72.00          | 103.00         | 185.00 |
| Price, with Check and Waste, per doz. .... | 16.50         | 18.50         | 22.00         | 27.50         | 47.50 | 75.00          | 107.00         | 195.00 |

Rough Stop, Lever Handle, Round Way, Screwed for Iron Pipe.

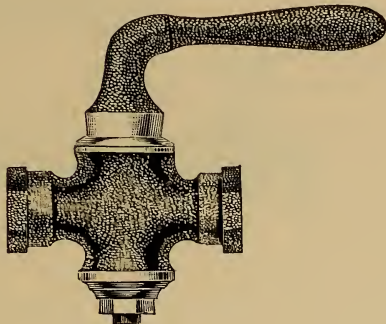


Fig. 188.

| Size, inches.....                         | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2      |
|-------------------------------------------|---------------|---------------|---------------|---------------|-------|----------------|----------------|--------|
| Price, Plain, per doz.....                | 16.00         | 18.00         | 22.00         | 27.00         | 47.00 | 74.00          | 106.00         | 190.00 |
| Price, With Cheek and Waste, per doz..... | 17.00         | 19.00         | 23.00         | 28.50         | 49.00 | 77.00          | 110.00         | 200.00 |

PLAIN STOP.

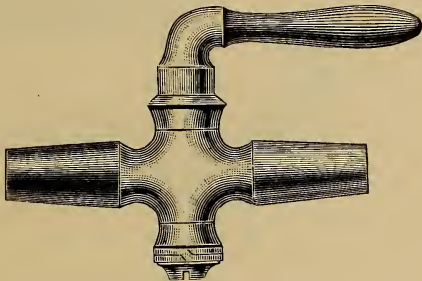


Fig. 189.

| Size, inches.....                  | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2      |
|------------------------------------|---------------|---------------|---------------|---------------|---------------|-------|----------------|----------------|--------|
| Price, Finished, per doz.....      | 10.50         | 12.50         | 15.50         | 18.50         | 25.00         | 37.00 | 62.00          | 86.00          | 175.00 |
| Price, Nickel Plated, per doz..... | 12.50         | 14.50         | 18.00         | 21.00         | 27.50         | 40.00 | .....          | .....          | .....  |
| Price, Silver Plated, per doz..... | 17.50         | 20.50         | 24.50         | 30.50         | 40.00         | 63.00 | .....          | .....          | .....  |

PLAIN STOP, SCREWED FOR IRON PIPE

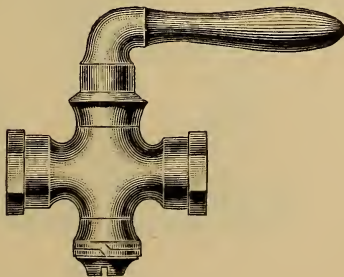


Fig. 190.

| Size, inches.....                  | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
|------------------------------------|---------------|---------------|---------------|---------------|---------------|-------|
| Price, Finished, per doz.....      | 11.50         | 13.50         | 16.50         | 20.50         | 27.00         | 40.00 |
| Price, Nickel-Plated, per doz..... | 13.50         | 15.50         | 19.00         | 23.00         | 29.50         | 43.00 |
| Price, Silver Plated, per doz..... | 18.50         | 21.50         | 25.50         | 32.50         | 42.00         | 66.00 |



SHOWER BATH COCK.

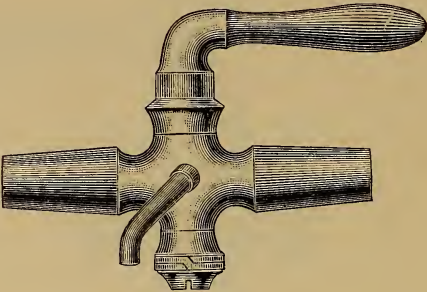


Fig. 191.

| Size, inches.....                  | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
|------------------------------------|---------------|---------------|---------------|---------------|-------|
| Price, Finished, per doz.....      | 14.00         | 17.00         | 20.00         | 27.00         | 40.00 |
| Price, Nickel-Plated, per doz..... | 16.00         | 19.00         | 22.50         | 29.50         | 43.00 |
| Price, Silver-Plated, per doz..... | 22.00         | 26.00         | 32.00         | 42.00         | 66.00 |

SHOWER BATH COCK, SCREWED FOR IRON PIPE.

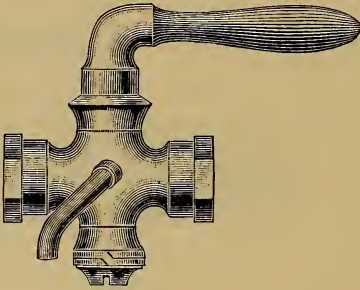


Fig. 192.

| Size, inches.....                  | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
|------------------------------------|---------------|---------------|---------------|---------------|-------|
| Price, Finished, per doz.....      | 15.00         | 18.00         | 22.00         | 29.00         | 43.00 |
| Price, Nickel Plated, per doz..... | 17.00         | 20.50         | 24.50         | 31.50         | 46.00 |
| Price, Silver Plated, per doz..... | 23.00         | 27.00         | 34.00         | 44.00         | 69.00 |

HYDRANT COCK, RIVET.

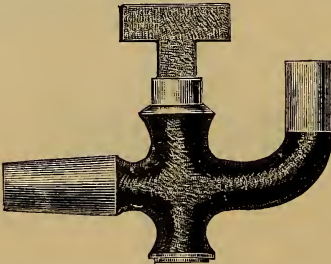


Fig. 193.

| Size, inches.....   | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
|---------------------|---------------|---------------|---------------|-------|
| Price, per doz..... | 13.50         | 15.50         | 20.50         | 32.00 |

## HYDRANT COCK, NUT AND WASHER.

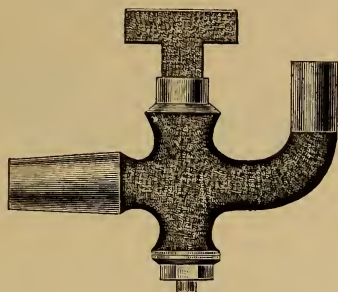


Fig. 194.

|                         |               |               |               |       |
|-------------------------|---------------|---------------|---------------|-------|
| Size, inches . . . . .  | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
| Price, per doz. . . . . | 14.00         | 17.00         | 21.00         | 33.00 |

## HYDRANT COCK, NUT AND WASHER.

For Lead and Iron Pipe.

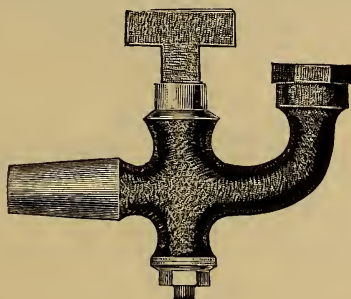


Fig. 195.

|                         |               |               |               |       |
|-------------------------|---------------|---------------|---------------|-------|
| Size, inches . . . . .  | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
| Price, per doz. . . . . | 14.50         | 18.00         | 22.00         | 34.50 |

## HYDRANT COCK, NUT AND WASHER.

Screwed for Iron Pipe.

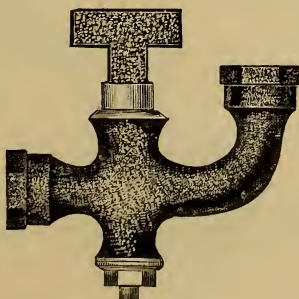


Fig. 196.

|                         |               |               |               |       |
|-------------------------|---------------|---------------|---------------|-------|
| Size, inches . . . . .  | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
| Price, per doz. . . . . | 15.00         | 18.50         | 23.00         | 36.00 |

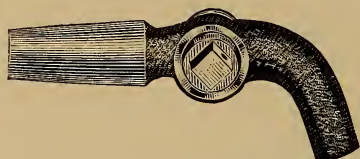
**BALL COCK.**

Fig. 197.

**Ball Cock, Screwed for Iron Pipe.**

Fig. 198.

|                               |               |               |               |               |               |       |                |
|-------------------------------|---------------|---------------|---------------|---------------|---------------|-------|----------------|
| Size, inches.....             | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     | $1\frac{1}{4}$ |
| Price, Fig. 197, per doz..... |               | 10.00         | 12.00         | 15.00         | 19.50         | 30.00 | 50.00          |
| Size, inches.....             |               | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     | $1\frac{1}{4}$ |
| Price, Fig. 198, per doz..... |               | \$11.00       | 13.00         | 16.00         | 21.50         | 33.00 | 54.00          |

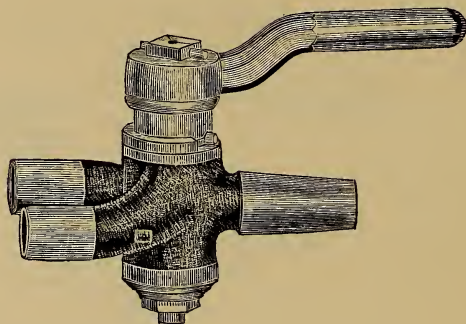
**RAIN AND WELL WATER COCK.**

Fig. 199.

|                     |               |               |               |               |               |       |                |                |        |
|---------------------|---------------|---------------|---------------|---------------|---------------|-------|----------------|----------------|--------|
| Size, inches.....   | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2      |
| Price, per doz..... |               |               |               |               | 50.00         | 70.00 | 84.00          | 120.00         | 200.00 |

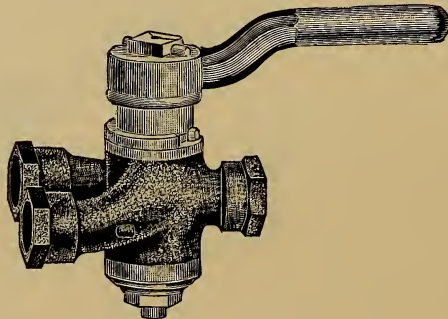
**RAIN AND WELL WATER COCK, SCREWED FOR IRON PIPE.**

Fig. 200.

|                     |               |       |                |                |        |
|---------------------|---------------|-------|----------------|----------------|--------|
| Size, inches.....   | $\frac{3}{4}$ | 1     | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2      |
| Price, per doz..... | \$56.00       | 79.00 | 96.00          | 138.00         | 230.00 |



Corporation Stop, Screwed for Mueller Tapping Machine, Bent Coupling.

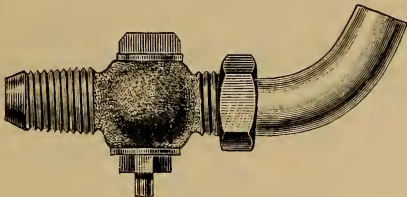


Fig. 201.

|                   |               |               |               |               |      |
|-------------------|---------------|---------------|---------------|---------------|------|
| Size, inches..... | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1    |
| Price, each.....  | 1.20          | 1.35          | 1.70          | 2.50          | 3.85 |

Corporation Stop, Screwed for Mueller Tapping Machine, Straight Coupling.

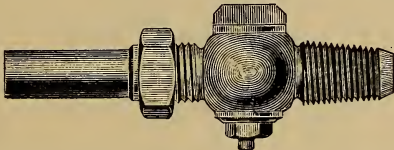


Fig. 202.

|                  |               |               |               |               |      |
|------------------|---------------|---------------|---------------|---------------|------|
| Size, inches ..  | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1    |
| Price, each..... | 1.20          | 1.35          | 1.70          | 2.50          | 3.85 |

Corporation Stop, Screwed for Mueller Tapping, Machine and Iron Pipe.

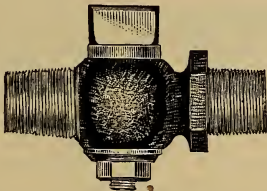


Fig. 203.

|                   |               |               |               |      |
|-------------------|---------------|---------------|---------------|------|
| Size, inches..... | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1    |
| Price, each.....  | 1.35          | 1.70          | 2.50          | 3.85 |

CORPORATION COCK, FOR WOOD MAINS.

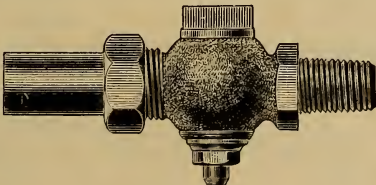


Fig. 204.

|                   |               |               |               |      |
|-------------------|---------------|---------------|---------------|------|
| Size, inches..... | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1    |
| Price, each ..... | 2.50          | 3.00          | 4.00          | 6.40 |

ALE LOCK COCK.



Fig. 205.

Price, Finished, per doz. ....\$30.00

LAGER BEER COCK.



Fig. 206.

Price, Finished, per doz. ....\$32.00

LAGER BEER COOLER COCK.



Fig. 207.

|                                |       |       |       |       |       |
|--------------------------------|-------|-------|-------|-------|-------|
| Length, inches. ....           | 14    | 16    | 18    | 20    | 22    |
| Price, Finished, per doz. .... | 40.00 | 44.00 | 48.00 | 52.00 | 56.00 |

LAGER BEER COOLER COCK.

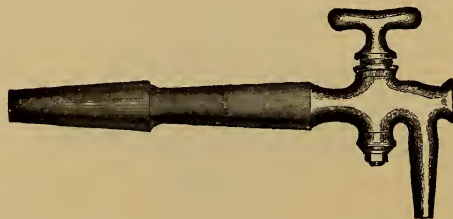


Fig. 208.

|                                |       |       |       |       |
|--------------------------------|-------|-------|-------|-------|
| Length, inches. ....           | 14    | 16    | 18    | 22    |
| Price, Finished, per doz. .... | 52.00 | 56.00 | 60.00 | 66.00 |

COOLER COCK.

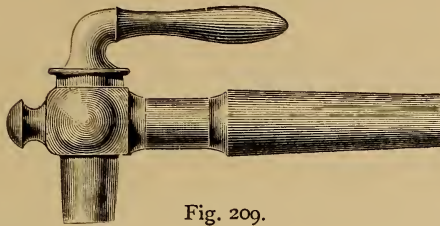


Fig. 209.

|                                    |               |               |               |               |
|------------------------------------|---------------|---------------|---------------|---------------|
| Size, inches .....                 | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ |
| Price, Finished, per doz.....      | 7.00          | 7.50          | 9.00          | 12.00         |
| Price, Nickel Plated, per doz..... | 8.50          | 9.00          | 10.50         | 14.00         |

URN COCK, DROP HANDLE.

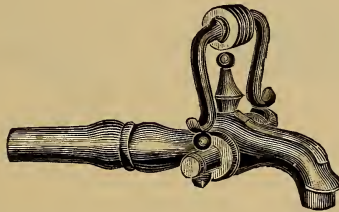


Fig. 210.

|                                    |               |                |               |                |
|------------------------------------|---------------|----------------|---------------|----------------|
| Size, inches.....                  | $\frac{1}{4}$ | $\frac{5}{16}$ | $\frac{3}{8}$ | $\frac{7}{16}$ |
| Price, Finished, per doz.....      | 28.00         | 30.00          | 32.00         | 36.00          |
| Price, Nickel Plated, per doz..... | 30.00         | 32.00          | 34.00         | 38.50          |
| Price, Silver Plated, per doz..... | 35.00         | 38.00          | 41.00         | 48.00          |

URN COCK, IVORY HANDLE.

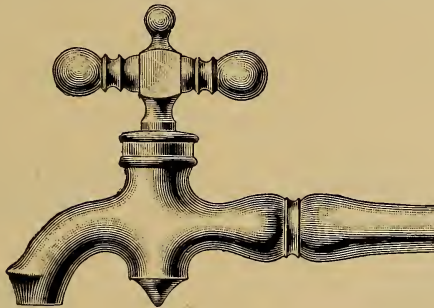


Fig. 211.

|                                    |               |               |                |               |
|------------------------------------|---------------|---------------|----------------|---------------|
| Size, inches.....                  | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{7}{16}$ | $\frac{1}{2}$ |
| Price, Finished, per doz.....      | 20.00         | 21.00         | 24.00          | 28.00         |
| Price, Nickel Plated, per doz..... | 22.00         | 23.00         | 26.50          | 30.50         |
| Price, Silver Plated, per doz..... | 27.00         | 29.00         | 33.00          | 37.00         |

URN GAUGE.

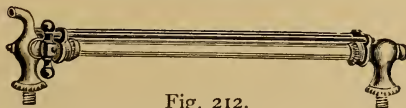


Fig. 212.

|                            |        |
|----------------------------|--------|
| Price, each .....          | \$5.00 |
| Price, Nickel Plated ..... | 6.00   |
| Price, Silver Plated.....  | 9.00   |



RACKING COCK, TO DRIVE.

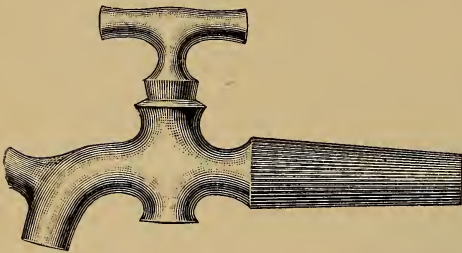


Fig. 213.

RACKING COCK, TO SCREW.

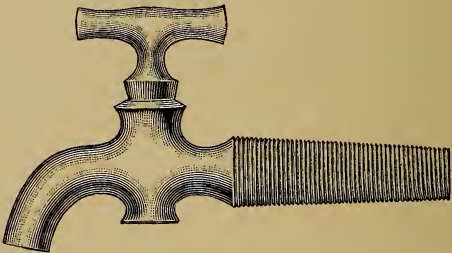


Fig. 214.

|                                         |      |      |       |       |       |       |
|-----------------------------------------|------|------|-------|-------|-------|-------|
| Size, inches.....                       | 1/4  | 3/8  | 1/2   | 5/8   | 3/4   | 1     |
| Price, Fig. 213, Finished, per doz..... | 5.00 | 7 50 | 10.00 | 14.50 | 17.00 | 30.00 |
| Size, inches ....                       | 1/4  | 3/8  | 1/2   | 5/8   | 3/4   | 1     |
| Price, Fig. 214, Finished, per doz..... | 5.50 | 8.00 | 11.00 | 16.00 | 19.00 | 32.50 |

LOCK COCK, TO DRIVE.

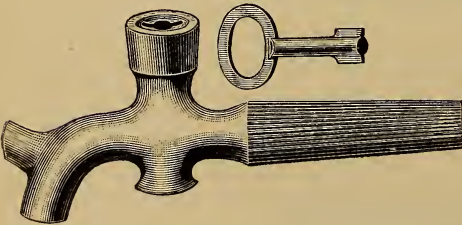


Fig. 215.

LOCK COCK, TO SCREW.

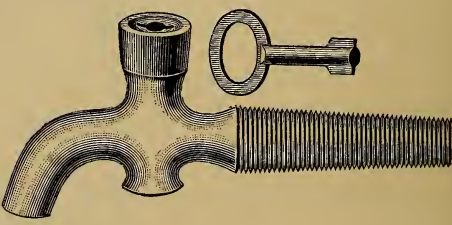


Fig. 216.

|                                         |      |      |       |       |       |       |
|-----------------------------------------|------|------|-------|-------|-------|-------|
| Size, inches.....                       | 1/4  | 3/8  | 1/2   | 5/8   | 3/4   | 1     |
| Price, Fig. 215, Finished, per doz..... | 6 50 | 8 50 | 12.00 | 16.50 | 20.00 | 35.00 |
| Size, inches.....                       | 1/4  | 3/8  | 1/2   | 5/8   | 3/4   | 1     |
| Price, Fig. 216, Finished, per doz..... | 7.00 | 9.00 | 13.00 | 18.00 | 22.00 | 37.50 |

GLOBE COCKS, LEVER HANDLE.

Tinned End.

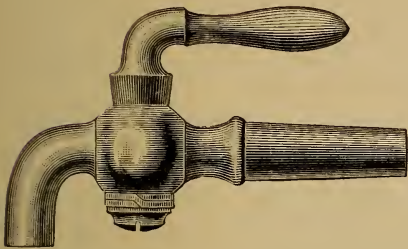


Fig. 217.

To Screw.

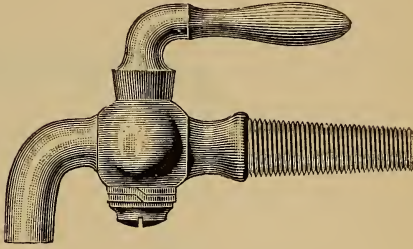


Fig. 218.

|                                         |               |               |               |               |               |       |
|-----------------------------------------|---------------|---------------|---------------|---------------|---------------|-------|
| Size, inches.....                       | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
| Price, Fig. 217, Finished, per doz..... | 9.00          | 11.00         | 14.50         | 18.00         | 24.00         | 36.00 |
| Size, inches.....                       | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
| Price, Fig. 218, Finished, per doz..... | 9.50          | 11.50         | 15.50         | 19.50         | 26.00         | 38.50 |

KEROSENE COCK.

To Screw.

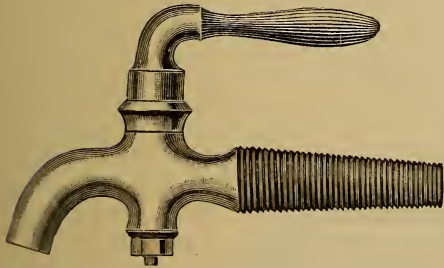


Fig. 219.

LIQUOR COCK.

To Screw.

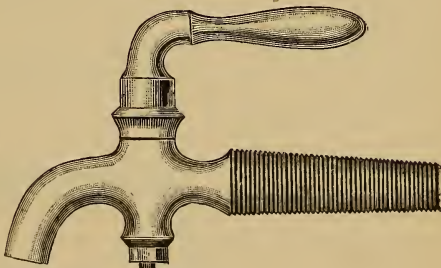


Fig. 220.

|                                         |               |               |               |               |       |
|-----------------------------------------|---------------|---------------|---------------|---------------|-------|
| Size, inches.....                       | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
| Price, Fig. 219, Finished, per doz..... | 12.50         | 15.00         | 19.00         | 26.00         | 42.50 |
| Size, inches.....                       | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
| Price, Fig. 220, Finished, per doz..... | 12.50         | 15.00         | 18.50         | 26.00         | 42.50 |

SWING BASIN COCK.

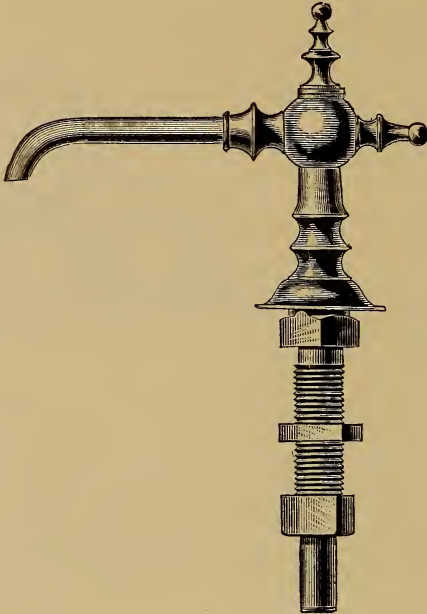


Fig. 221.

|                                      |       |
|--------------------------------------|-------|
| Price, Finished, per dozen.....      | 21.00 |
| Price, Nickel Plated, per dozen..... | 25.00 |
| Price, Silver Plated, per dozen..... | 33.00 |

BRACKET BASIN COCK.

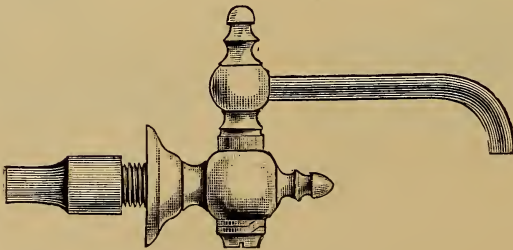


Fig. 222.

|                                      |       |
|--------------------------------------|-------|
| Price, Finished, per dozen.....      | 18.00 |
| Price, Nickel Plated, per dozen..... | 22.00 |
| Price, Silver Plated, per dozen..... | 26.00 |



BRACKET BASIN COCK.

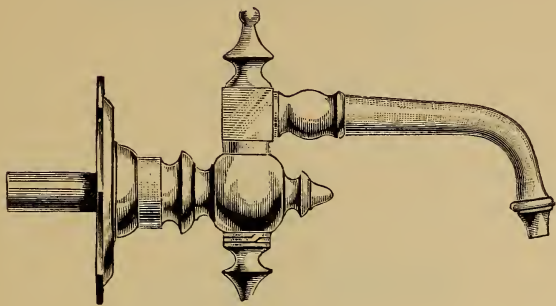


Fig. 223.

|                                     |       |
|-------------------------------------|-------|
| Price, Finished, per doz. ....      | 34.00 |
| Price, Nickel Plated, per doz. .... | 40.00 |
| Price, Silver Plated, per doz. .... | 44.00 |

BRACKET SHAMPOOING COCK.

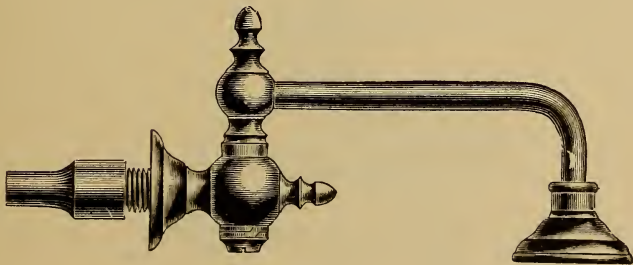


Fig. 224.

|                                     |       |
|-------------------------------------|-------|
| Price, Finished, per doz. ....      | 30.00 |
| Price, Nickel Plated, per doz. .... | 34.00 |
| Price, Silver Plated, per doz. .... | 38.00 |

COMPRESSION WORK.

COMPRESSION PLAIN BIBB.

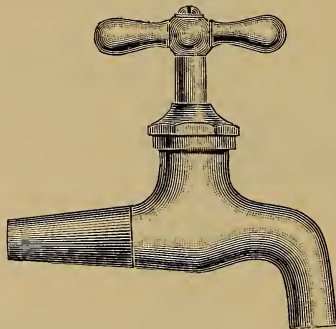


Fig. 225.

| Size, inches . . . . .                 | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2      |
|----------------------------------------|---------------|---------------|---------------|---------------|-------|----------------|----------------|--------|
| Price, Finished, per doz. . . . .      | 9.00          | 10.00         | 12.00         | 18.00         | 34.00 | 52.00          | 80.00          | 160.00 |
| Price, Nickel Plated, per doz. . . . . | 11.00         | 12.50         | 14.50         | 20.50         | 37.00 | 56.00          | 86.00          | 170.00 |
| Price, Silver Plated, per doz. . . . . | 16.50         | 19.00         | 24.00         | 33.00         | 60.00 | 90.00          | 140.00         | 280.00 |

COMPRESSION HOSE BIBB.

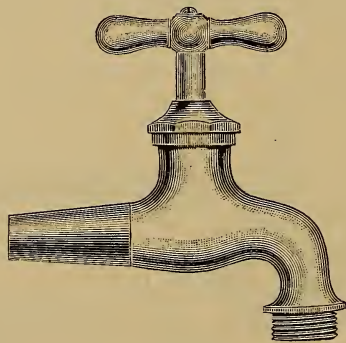


Fig. 226.

| Size, inches . . . . .                 | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2      |
|----------------------------------------|---------------|---------------|---------------|---------------|-------|----------------|----------------|--------|
| Price, Finished, per doz. . . . .      | 10.00         | 11.00         | 13.00         | 20.00         | 37.00 | 56.00          | 86.00          | 170.00 |
| Price, Nickel Plated, per doz. . . . . | 12.00         | 13.50         | 15.00         | 22.50         | 40.00 | 60.00          | 90.00          | 180.00 |
| Price, Silver Plated, per doz. . . . . | 17.50         | 20.00         | 25.00         | 35.00         | 63.00 | 95.00          | 140.00         | 280.00 |

Compression Plain Bibb, Screwed for Iron Pipe, with Shoulder.

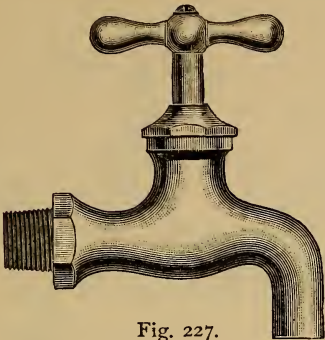


Fig. 227.

| Size, inches .....                 | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2      |
|------------------------------------|---------------|---------------|---------------|---------------|-------|----------------|----------------|--------|
| Price, Finished, per doz.....      | 10.00         | 11.00         | 13.00         | 20.00         | 37.00 | 56.00          | 86.00          | 170.00 |
| Price, Nickel Plated, per doz..... | 12.00         | 13.50         | 15.50         | 22.50         | 40.00 | .....          | .....          | .....  |
| Price, Silver Plated, per doz..... | 17.50         | 20.00         | 25.00         | 35.00         | 63.00 | .....          | .....          | .....  |

Compression Hose Bibb, Screwed for Iron Pipe, with Shoulder.

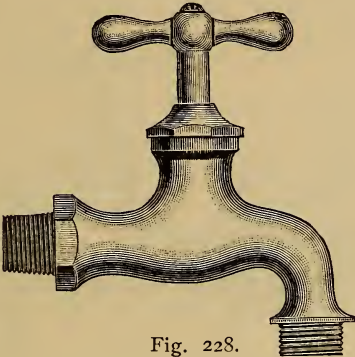


Fig. 228.

| Size, inches.....                  | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2      |
|------------------------------------|---------------|---------------|---------------|---------------|-------|----------------|----------------|--------|
| Price, Finished, per doz.....      | 11.00         | 12.00         | 14.00         | 22.00         | 40.00 | 60.00          | 92.00          | 180.00 |
| Price, Nickel Plated, per doz..... | 13.00         | 14.50         | 16.50         | 24.50         | 43.00 | .....          | .....          | .....  |
| Price, Silver Plated, per doz..... | 18.50         | 21.00         | 26.00         | 37.00         | 66.00 | .....          | .....          | .....  |

Compression Plain Bibb, Screwed for Iron Pipe, without Shoulder.

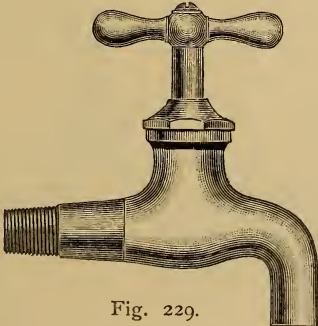


Fig. 229.

| Size, inches ..                    | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2      |
|------------------------------------|---------------|---------------|---------------|---------------|-------|----------------|----------------|--------|
| Price, Finished, per doz.....      | 10.00         | 11.00         | 13.00         | 20.00         | 37.00 | 56.00          | 86.00          | 170.00 |
| Price, Nickel Plated, per doz..... | 12.00         | 13.50         | 15.50         | 22.50         | 40.00 | .....          | .....          | .....  |
| Price, Silver Plated, per doz ..   | 18.00         | 20.00         | 25.00         | 35.00         | 63.00 | .....          | .....          | .....  |



COMPRESSION HOSE BIBB, SCREWED FOR IRON PIPE.  
Without Shoulder.

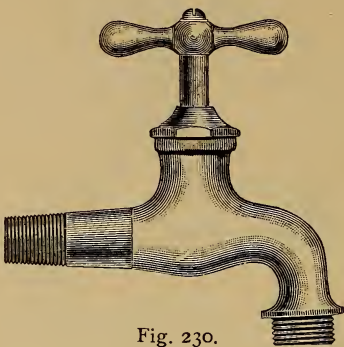


Fig. 230.

| Size, inches.....                  | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2      |
|------------------------------------|---------------|---------------|---------------|---------------|-------|----------------|----------------|--------|
| Price, Finished, per doz.....      | 11.00         | 12 00         | 14.00         | 22.00         | 40.00 | 60.00          | 92.00          | 180.00 |
| Price, Nickel Plated, per doz..... | 13.00         | 14.50         | 16.50         | 24 50         | 43.00 | .....          | .....          | .....  |
| Price, Silver Plated, per doz..... | 19.00         | 21.00         | 26.00         | 37.00         | 66.00 | .....          | .....          | .....  |

COMPRESSION PLAIN BIBB, FLANGE AND THIMBLE.

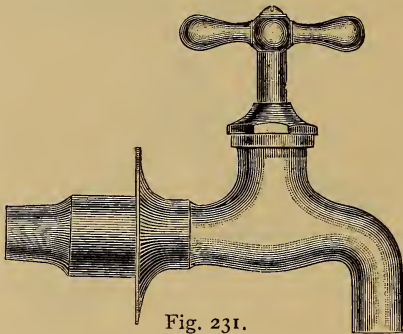


Fig. 231.

| Size, inches.....                  | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
|------------------------------------|---------------|---------------|---------------|---------------|-------|
| Price, Finished, per doz.....      | 16.00         | 18.00         | 21.00         | 28.00         | 51.00 |
| Price, Nickel Plated, per doz..... | 19.00         | 21.50         | 24.50         | 32.00         | 55.00 |
| Price, Silver Plated, per doz..... | 25.00         | 30.00         | 36.00         | 46.00         | 79.00 |

COMPRESSION HOSE BIBB, FLANGE AND THIMBLE.

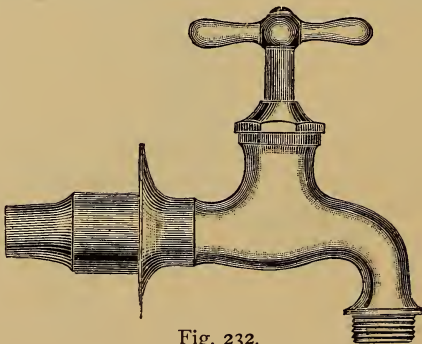


Fig. 232.

| Size, inches.....                  | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
|------------------------------------|---------------|---------------|---------------|---------------|-------|
| Price, Finished, per doz.....      | 17.00         | 19.00         | 22.00         | 30.00         | 54.00 |
| Price, Nickel Plated, per doz..... | 20.00         | 22.50         | 25.50         | 34.00         | 58.00 |
| Price, Silver Plated, per doz..... | 26.00         | 31.00         | 37.00         | 48.00         | 82.00 |

COMPRESSION WASH TRAY BIBB.

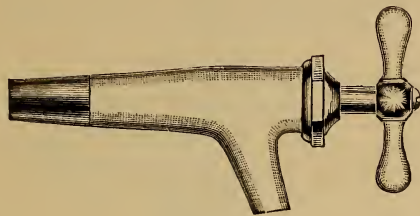


Fig. 233.

| Size, inches. ....                 | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
|------------------------------------|---------------|---------------|---------------|---------------|-------|
| Price, Finished, per doz.....      | 10.00         | 11.00         | 13.00         | 19.00         | 36.00 |
| Price, Nickel Plated, per doz..... | 12.00         | 13.50         | 15.50         | 21.50         | 39.00 |

Compression Wash Tray Bibb, Screwed for Iron Pipe.

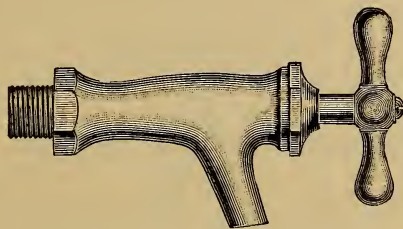


Fig. 234.

| Size, inches. ....                 | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
|------------------------------------|---------------|---------------|---------------|---------------|-------|
| Price, Finished, per doz.....      | 11.00         | 12.00         | 14.00         | 21.00         | 29.00 |
| Price, Nickel Plated, per doz..... | 13.00         | 14.50         | 16.50         | 23.50         | 42.00 |

Compression Wash Tray Bibb, Flange and Thimble.

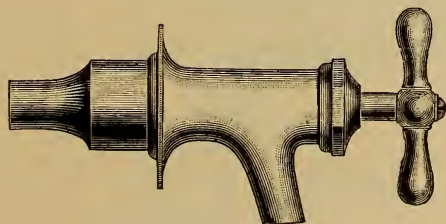


Fig. 235.

| Size, inches. ....                 | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
|------------------------------------|---------------|---------------|---------------|---------------|-------|
| Price, Finished, per doz.....      | 17.00         | 19.00         | 22.00         | 30.00         | 53.00 |
| Price, Nickel Plated, per doz..... |               |               |               |               |       |

COMPRESSION BATH BIBB.

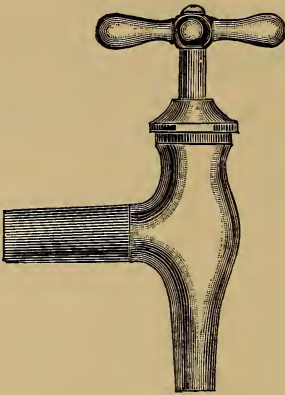


Fig. 236.

| Size, inches.....                  | 1/2   | 5/8   | 3/4   | 1     |
|------------------------------------|-------|-------|-------|-------|
| Price, Finished, per doz.....      | 14.00 | 17.00 | 26.00 | 42.00 |
| Price, Nickel Plated, per doz..... | 16.50 | 19.50 | 28.50 | 45.00 |
| Price, Silver Plated, per doz..... | 23.00 | 29.00 | 41.00 | 68.00 |

COMPRESSION BATH BIBB, FLANGE AND THIMBLE.

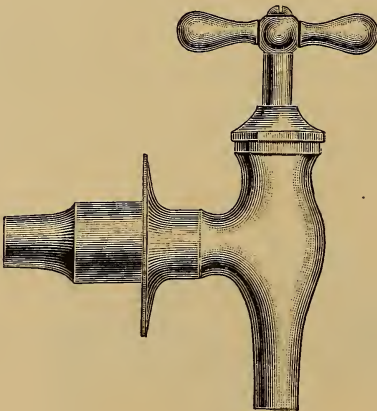


Fig. 237.

| Size, inches... ..                 | 1/2   | 5/8   | 3/4   | 1     |
|------------------------------------|-------|-------|-------|-------|
| Price, Finished, per doz.....      | 22.00 | 26.00 | 36.00 | 59.00 |
| Price, Nickel Plated, per doz..... | 25.50 | 29.50 | 40.00 | 63.00 |
| Price, Silver Plated, per doz..... | 34.00 | 41.00 | 54.00 | 87.00 |

## COMPRESSION BATH BIBB, SCREWED FOR IRON PIPE.

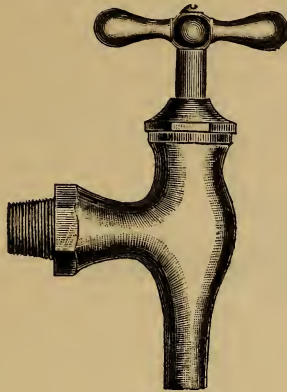


Fig. 238.

| Size, inches.....                  | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
|------------------------------------|---------------|---------------|---------------|-------|
| Price, Finished, per doz.....      | 15.00         | 18.00         | 28.00         | 45.00 |
| Price, Nickel Plated, per doz..... | 17.50         | 20.50         | 30.50         | 48.00 |
| Price, Silver Plated, per doz..... | 24.00         | 30.00         | 43.00         | 71.00 |

## COMPRESSION STOP.

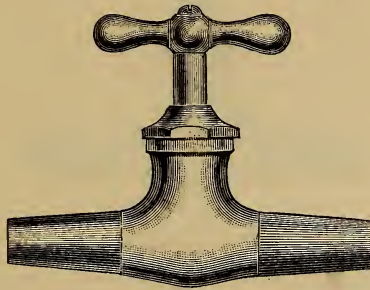


Fig. 239.

| Size, inches.....                  | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
|------------------------------------|---------------|---------------|---------------|---------------|-------|
| Price, Finished, per doz.....      | 10.00         | 11.00         | 13.00         | 19.50         | 36.00 |
| Price, Nickel Plated, per doz..... | 12.00         | 13.50         | 15.50         | 22.00         | 39.00 |
| Price, Silver Plated, per doz..... | 17.50         | 20.00         | 25.00         | 34.50         | 62.00 |

## COMPRESSION STOP, FOR LEAD AND IRON PIPE.

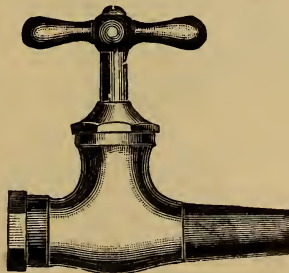


Fig. 240.

| Size, inches.....                  | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
|------------------------------------|---------------|---------------|---------------|---------------|-------|
| Price, Finished, per doz.....      | 10.50         | 11.50         | 13.50         | 20.50         | 37.00 |
| Price, Nickel Plated, per doz..... | 12.50         | 14.00         | 16.00         | 23.00         | 40.00 |
| Price, Silver Plated, per doz..... | 18.00         | 20.50         | 25.50         | 38.50         | 63.00 |



COMPRESSION STOP, SCREWED FOR IRON PIPE.

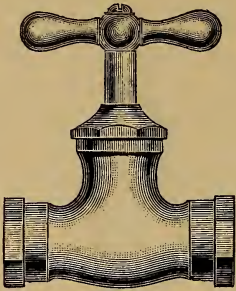


Fig. 241.

| Size, inches.....                  | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
|------------------------------------|---------------|---------------|---------------|---------------|-------|
| Price, Finished, per doz.....      | 11.00         | 12.00         | 14.00         | 21.00         | 38.00 |
| Price, Nickel Plated, per doz..... | 13.00         | 14.50         | 16.50         | 23.50         | 41.00 |
| Price, Silver Plated, per doz..... | 18.50         | 21.00         | 26.00         | 38.00         | 65.00 |

COMPRESSION SHOWER BATH COCK.

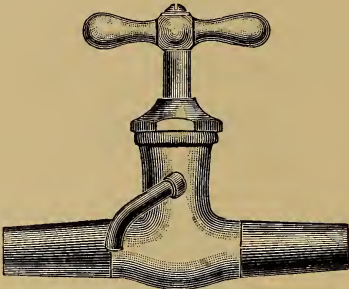


Fig. 242.

| Size, inches.....                  | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
|------------------------------------|---------------|---------------|---------------|-------|
| Price, Finished, per doz.....      | 12.00         | 14.00         | 20.50         | 37.00 |
| Price, Nickel Plated, per doz..... | 14.50         | 16.50         | 23.00         | 40.00 |
| Price, Silver Plated, per doz..... | 21.00         | 26.00         | 35.50         | 63.00 |

COMPRESSION SHOWER BATH COCK.

Screwed for Iron Pipe.

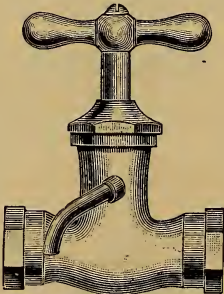


Fig. 243.

| Size, inches.....                  | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
|------------------------------------|---------------|---------------|---------------|-------|
| Price, Finished, per doz.....      | 13.00         | 16.00         | 22.50         | 40.00 |
| Price, Nickel Plated, per doz..... | 15.50         | 18.50         | 25.00         | 43.00 |
| Price, Silver Plated, per doz..... | 22.00         | 28.00         | 37.50         | 66.00 |

COMPRESSION URINAL COCK.

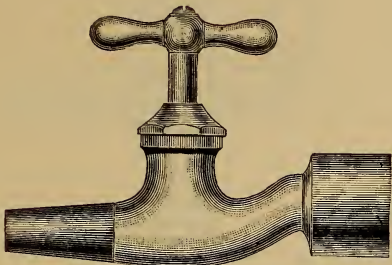


Fig. 244.

|                                    |               |
|------------------------------------|---------------|
| Size, inches .....                 | $\frac{1}{2}$ |
| Price, Finished, per doz.....      | 18.00         |
| Price, Nickel Plated, per doz..... | 21.00         |
| Price, Silver Plated, per doz..... | 28.00         |

COMPRESSION SILL COCK.

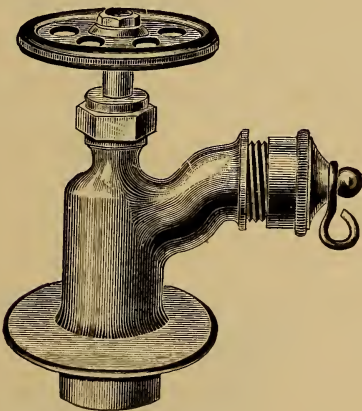


Fig. 245.

|                                    |               |               |
|------------------------------------|---------------|---------------|
| Size, inches .....                 | $\frac{1}{2}$ | $\frac{3}{4}$ |
| Price, Finished, per doz.....      | 28.00         | 28.00         |
| Price, Nickel Plated, per doz..... | 32.00         | 32.00         |

COMPRESSION HOPPER COCK.

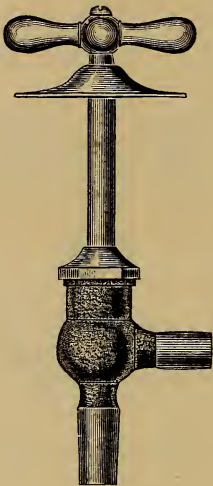


Fig. 246.

| Size, inches.....                                           | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ |
|-------------------------------------------------------------|---------------|---------------|---------------|
| Price, Rough, Finished Flange and Handle, per doz.....      | 16.00         | 19.00         | 24.00         |
| Price, Rough, Nickel Plated Flange and Handle, per doz..... | 18.50         | 21.50         | 26.50         |
| Price, Rough, Silver Plated Flange and Handle, per doz..... | 25.00         | 31.00         | 39.00         |

COMPRESSION HOPPER COCK, SCREWED FOR IRON PIPE.

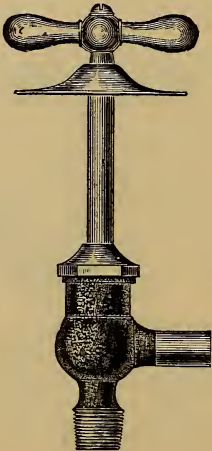


Fig. 247.

| Size, inches.....                                           | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ |
|-------------------------------------------------------------|---------------|---------------|---------------|
| Price, Rough, Finished Flange and Handle, per doz.....      | 17.00         | 20.00         | 26.00         |
| Price, Rough, Nickel Plated Flange and Handle, per doz..... | 19.50         | 22.50         | 28.50         |
| Price, Rough, Silver Plated Flange and Handle, per doz..... | 26.00         | 32.00         | 41.00         |

COMPRESSION HYDRANT COCK.

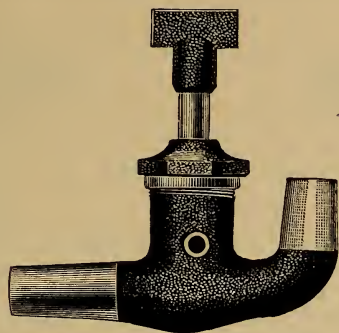


Fig. 248.

|                     |               |               |               |       |
|---------------------|---------------|---------------|---------------|-------|
| Size, inches.....   | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
| Price, per doz..... | 14.00         | 17.00         | 22.00         | 38.00 |

COMPRESSION HYDRANT COCK, FOR LEAD AND IRON PIPE.

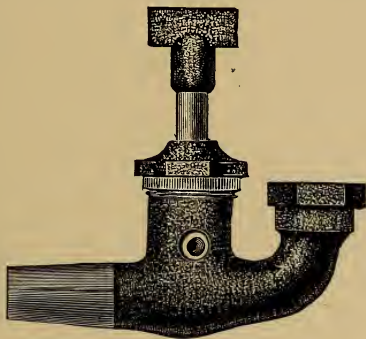


Fig. 249.

|                     |               |               |               |       |
|---------------------|---------------|---------------|---------------|-------|
| Size, inches.....   | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
| Price, per doz..... | 14.50         | 18.00         | 23.00         | 39.50 |

COMPRESSION HYDRANT COCK, SCREWED FOR IRON PIPE.



Fig. 250.

|                     |               |               |               |       |
|---------------------|---------------|---------------|---------------|-------|
| Size, inches.....   | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
| Price, per doz..... | 15.00         | 19.00         | 24.00         | 41.00 |



COMPRESSION BALL COCKS.

For Lead Pipe.

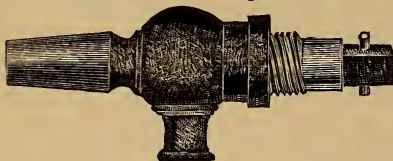


Fig. 251.

Screwed for Iron Pipe.



Fig. 252.

|                               |               |               |               |               |       |
|-------------------------------|---------------|---------------|---------------|---------------|-------|
| Size, inches.....             | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
| Price, Fig. 251, per doz..... | 8.50          | 9.50          | 11.00         | 17.00         | 30.00 |
| Size, inches.....             | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
| Price, Fig. 252, per doz..... | 9.50          | 10.50         | 12.00         | 19.00         | 33.00 |

COMPRESSION PANTRY COCKS.

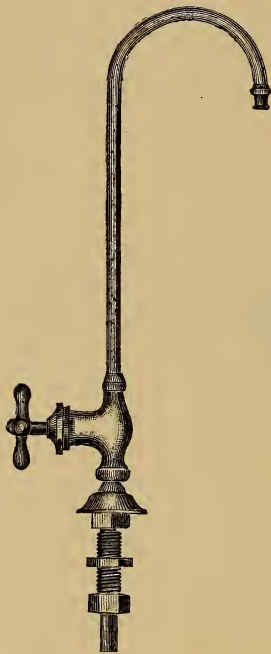


Fig. 253.

PLAIN END.

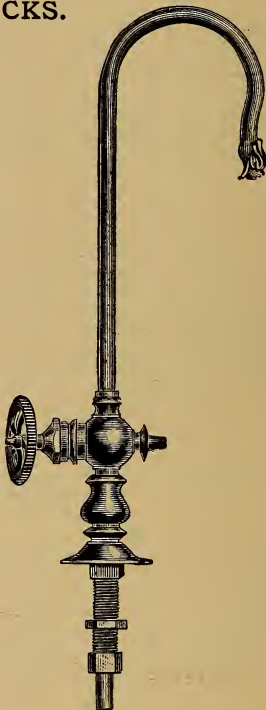


Fig. 254.

|                                              |       |
|----------------------------------------------|-------|
| Price, Fig. 253, Finished, per doz.....      | 30.00 |
| Price, Fig. 253, Nickel Plated, per doz..... | 34.00 |
| Price, Fig. 253, Silver Plated, per doz..... | 45.00 |

HOSE END.

|                                              |       |
|----------------------------------------------|-------|
| Price, Fig. 253, Finished, per doz.....      | 33.00 |
| Price, Fig. 253, Nickel Plated, per doz..... | 37.00 |
| Price, Fig. 253, Silver Plated, per doz..... | 48.00 |

PLAIN END.

|                                              |       |
|----------------------------------------------|-------|
| Price, Fig. 254, Finished, per doz.....      | 60.00 |
| Price, Fig. 254, Nickel Plated, per doz..... | 68.00 |
| Price, Fig. 254, Silver Plated, per doz..... | 80.00 |

HOSE END.

|                                              |       |
|----------------------------------------------|-------|
| Price, Fig. 254, Finished, per doz.....      | 63.00 |
| Price, Fig. 254, Nickel Plated, per doz..... | 71.00 |
| Price, Fig. 254, Silver Plated, per doz..... | 83.00 |

COMPRESSION BASIN COCKS.

Tee Handle.

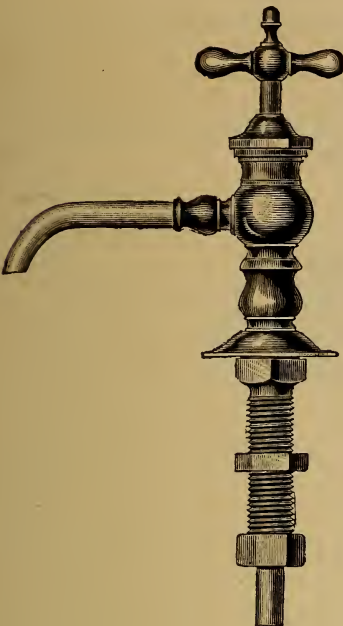


Fig. 255.

Cross Handle.

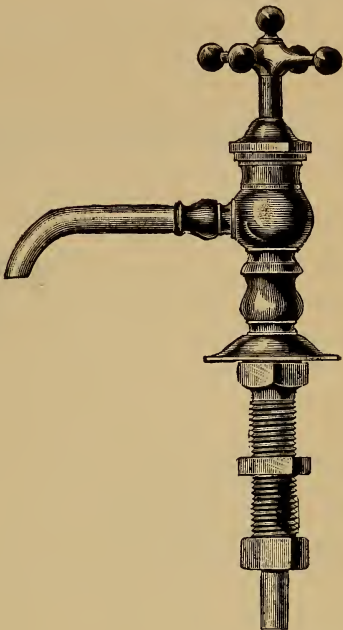


Fig. 256.

|                                              |       |                                              |       |
|----------------------------------------------|-------|----------------------------------------------|-------|
| Price, Fig. 255, Finished, per doz.....      | 17.00 | Price, Fig. 256, Finished, per doz.....      | 19.00 |
| Price, Fig. 255, Nickel Plated, per doz..... | 20.00 | Price, Fig. 256, Nickel Plated, per doz....  | 22.00 |
| Price, Fig. 255, Silver Plated, per doz..... | 26.00 | Price, Fig. 256, Silver Plated, per doz..... | 28.00 |

COMPRESSION BASIN COCK.

Cross Handle.

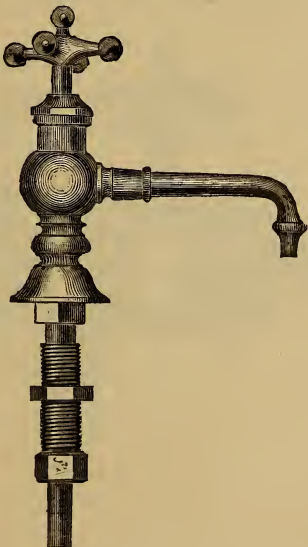


Fig. 257.

|                                    |       |
|------------------------------------|-------|
| Price, Finished, per doz.....      | 38.00 |
| Price, Nickel Plated, per doz..... | 42.00 |
| Price, Silver Plated, per doz..... | 50.00 |

COMPRESSION DOUBLE BASIN COCK, FOR BACK OF SLAB.

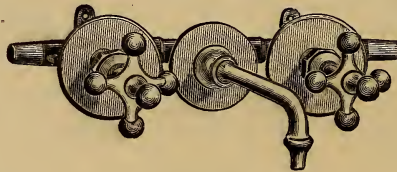


Fig. 258.

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|                                 |        |
|---------------------------------|--------|
| Price, Finished, each.....      | \$5.00 |
| Price, Nickel Plated, each..... | 5.50   |
| Price, Silver Plated, each..... | 6.50   |

---

COMPRESSION DOUBLE BATH COCK.

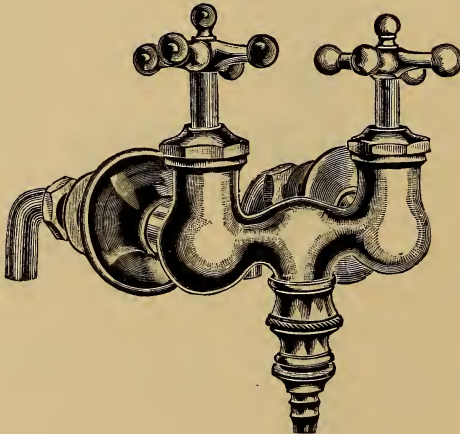


Fig. 259.

---

|                                 |        |
|---------------------------------|--------|
| Price, Finished, each.....      | \$6.50 |
| Price, Nickel Plated, each..... | 7.00   |
| Price, Silver Plated, each..... | 8.50   |

---

## COMPRESSION DOUBLE BATH COCK, WITH CHAIN STAY.

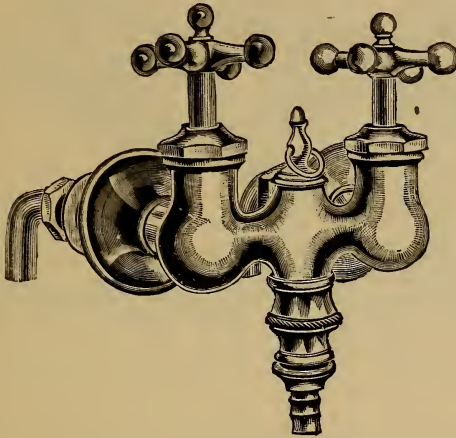


Fig. 260.

---

|                                     |        |
|-------------------------------------|--------|
| Price, Finished, each. . . . .      | \$7.50 |
| Price, Nickel Plated, each. . . . . | 8.00   |
| Price, Silver Plated, each. . . . . | 9.50   |

---

## COMPRESSION DOUBLE BATH COCK, WITH RING CUP.

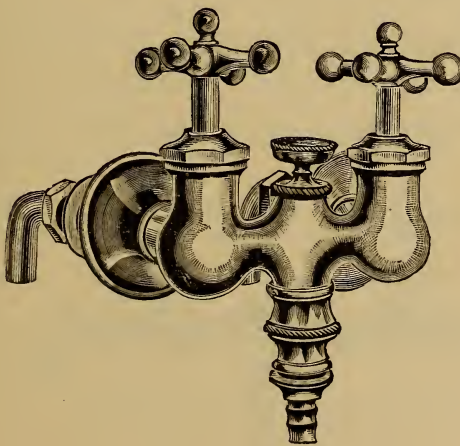


Fig. 261.

---

|                                     |        |
|-------------------------------------|--------|
| Price, Finished, each. . . . .      | \$7.50 |
| Price, Nickel Plated, each. . . . . | 8.00   |
| Price, Silver Plated, each. . . . . | 9.50   |

---



COMPRESSION DOUBLE BATH COCK.

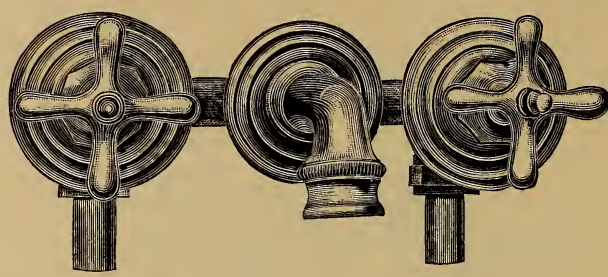


Fig. 262.

|                                 |        |
|---------------------------------|--------|
| Price, Finished, each.....      | \$5.00 |
| Price, Nickel Plated, each..... | 5.50   |
| Price, Silver Plated, each..... | 7.00   |

COMPRESSION DOUBLE BATH COCK, HANDLES IN FRONT.

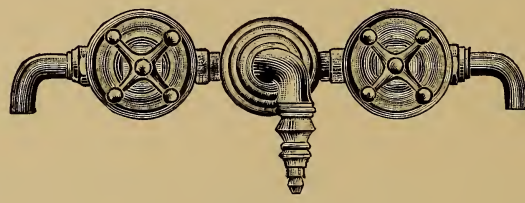


Fig. 263.

|                                 |        |
|---------------------------------|--------|
| Price, Finished, each.....      | \$7.00 |
| Price, Nickel Plated, each..... | 7.50   |
| Price, Silver Plated, each..... | 9.00   |

COMPRESSION DOUBLE BATH COCK, HANDLES ON TOP.

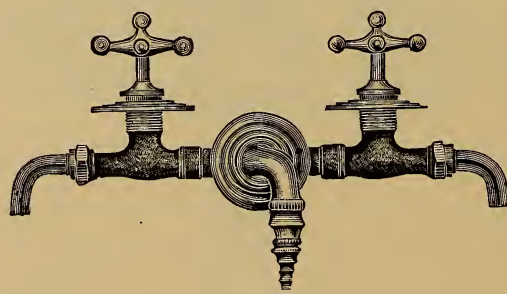


Fig. 264.

|                                 |        |
|---------------------------------|--------|
| Price, Finished, each.....      | \$7.00 |
| Price, Nickel Plated, each..... | 7.50   |
| Price, Silver Plated, each..... | 9.00   |

## EJECTOR COMPRESSION WORK.

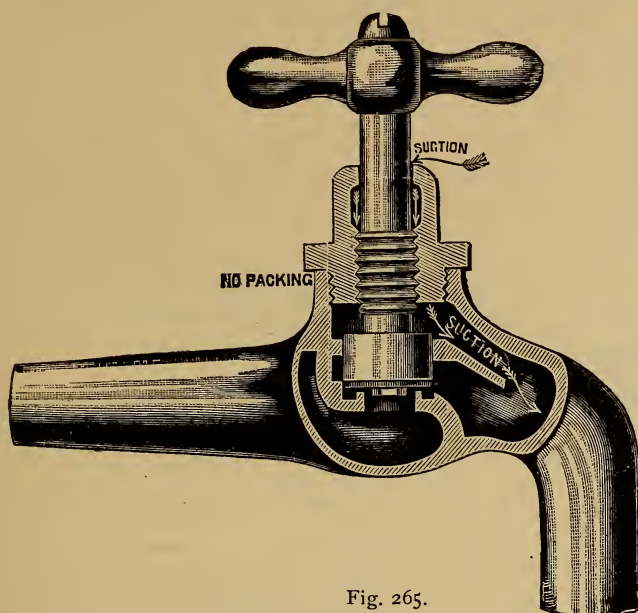


Fig. 265.

### COMPRESSION PLAIN BIBBS, FOR LEAD PIPE.

| Size, inches.....                  | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
|------------------------------------|---------------|---------------|---------------|-------|
| Price, Finished, per doz.....      | 10.00         | 12.00         | 18.00         | 34.00 |
| Price, Nickel Plated, per doz..... | 12.50         | 14.50         | 20.50         | 37.00 |
| Price, Silver Plated, per doz..... | 19.00         | 24.00         | 33.00         | 60.00 |

### COMPRESSION HOSE BIBBS, FOR LEAD PIPE.

Fig. 266. (Not illustrated.)

| Size, inches.....                  | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
|------------------------------------|---------------|---------------|---------------|-------|
| Price, Finished, per doz.....      | 11.00         | 13.00         | 20.00         | 37.00 |
| Price, Nickel Plated, per doz..... | 13.50         | 15.50         | 22.50         | 40.00 |
| Price, Silver Plated, per doz..... | 20.00         | 25.00         | 35.00         | 63.00 |

### COMPRESSION PLAIN BIBBS, SCREWED FOR IRON PIPE.

Fig. 267. (Not illustrated.)

| Size, inches.....                  | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
|------------------------------------|---------------|---------------|---------------|-------|
| Price, Finished, per doz.....      | 11.00         | 13.00         | 20.00         | 37.00 |
| Price, Nickel Plated, per doz..... | 13.50         | 15.50         | 22.50         | 40.00 |
| Price, Silver Plated, per doz..... | 20.00         | 25.00         | 35.00         | 63.00 |

### COMPRESSION HOSE BIBBS, SCREWED FOR IRON PIPE.

Fig. 268. (Not illustrated.)

| Size, inches.....                  | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
|------------------------------------|---------------|---------------|---------------|-------|
| Price, Finished, per doz.....      | 12.00         | 14.00         | 22.00         | 40.00 |
| Price, Nickel Plated, per doz..... | 14.50         | 16.50         | 24.50         | 43.00 |
| Price, Silver Plated, per doz..... | 21.00         | 26.00         | 37.00         | 66.00 |

### COMPRESSION WASH TRAY BIBBS.

Fig. 269. (Not illustrated.)

| Size, inches.....                  | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
|------------------------------------|---------------|---------------|---------------|-------|
| Price, Finished, per doz.....      | 11.00         | 13.00         | 19.00         | 36.00 |
| Price, Nickel Plated, per doz..... | 13.50         | 15.50         | 21.50         | 39.00 |

We recommend these goods as the very best work made for high pressure, and far superior to the ordinary Compression work.

EJECTOR COMPRESSION WORK.

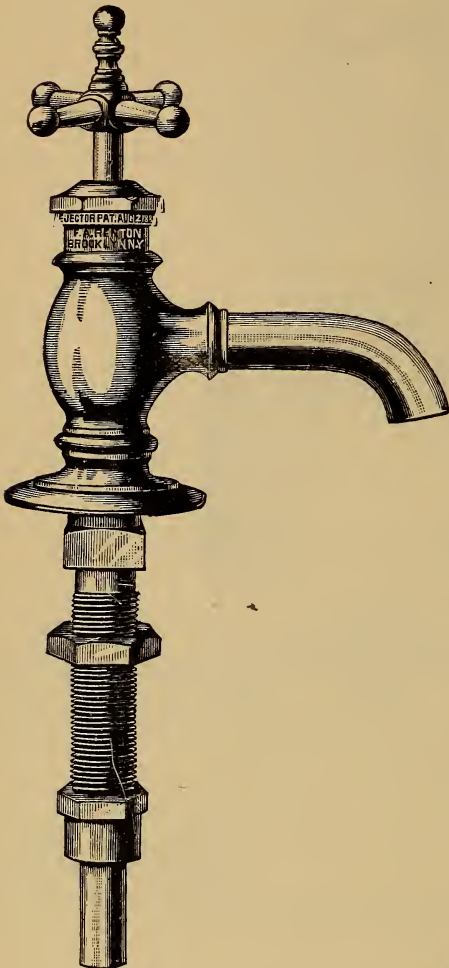


Fig. 270

Compression Double  
Bath Cock.

Fig. 273.

Price, Nickel Plated, each... 16.00  
Price, Silver Plated, each... 21.00

COMPRESSION BASIN COCK.

Fig. 270.

|                                    |       |
|------------------------------------|-------|
| Price, Nickel Plated, per doz..... | 35.00 |
| Price, Silver Plated, per doz..... | 45.00 |

COMPRESSION URINAL COCK.

Fig. 271. (Not illustrated.)

|                                    |               |               |
|------------------------------------|---------------|---------------|
| Size, inches.....                  | $\frac{1}{2}$ | $\frac{5}{8}$ |
| Price, Finished, per doz. ....     | 18.00         | 20.00         |
| Price, Nickel Plated, per doz..... | 21.00         | 23.00         |
| Price, Silver Plated, per doz..... | 28.00         | 33.00         |

COMPRESSION PANTRY COCK.

Fig. 272. (Not illustrated.)

|                                    |       |
|------------------------------------|-------|
| Price, Nickel Plated, per doz..... | 48.00 |
| Price, Silver Plated, per doz..... | 58.00 |

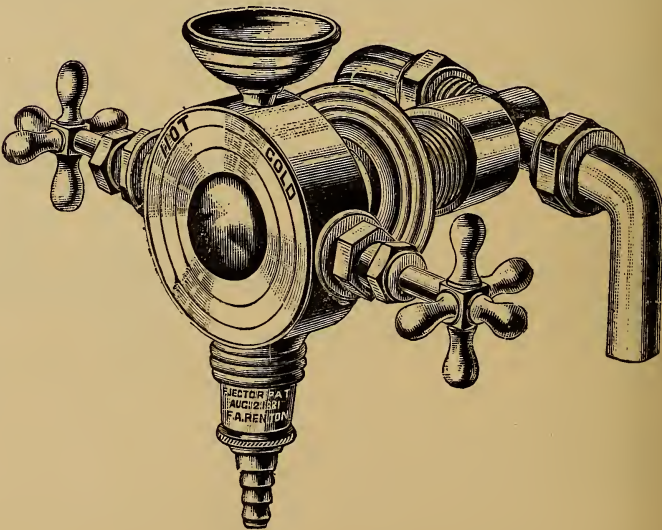


Fig. 273.



PRIER'S SELF-CLOSING WORK.

PLAIN BIBB FOR LEAD PIPE.

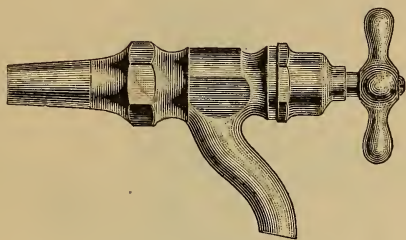


Fig. 274.

| Size, inches .....                  | $\frac{1}{2}$ | $\frac{5}{8}$ |
|-------------------------------------|---------------|---------------|
| Price, Finished, per doz.....       | 24.00         | 27.00         |
| Price, Nickel Plated, per doz.....  | 39.00         | 42.00         |
| Price, Silver Plated, per doz. .... | 42.00         | 51.00         |

PLAIN BIBBS FOR IRON PIPE.

Fig. 275. (Not illustrated.)

| Size, inches.....                  | $\frac{1}{2}$ | $\frac{5}{8}$ |
|------------------------------------|---------------|---------------|
| Price, Finished, per doz.....      | 28.00         | 31.00         |
| Price, Nickel Plated, per doz..... | 43.00         | 46.00         |
| Price, Silver Plated, per doz..... | 46.00         | 55.00         |

STOPS FOR LEAD PIPE.

Fig. 276. (Not illustrated.)

| Size, inches .....                  | $\frac{1}{2}$ | $\frac{5}{8}$ |
|-------------------------------------|---------------|---------------|
| Price, Finished, per doz.. ..       | 24.00         | 27.00         |
| Price, Nickel Plated, per doz.....  | 39.00         | 42.00         |
| Price, Silver Plated, per doz. .... | 42.00         | 51.00         |

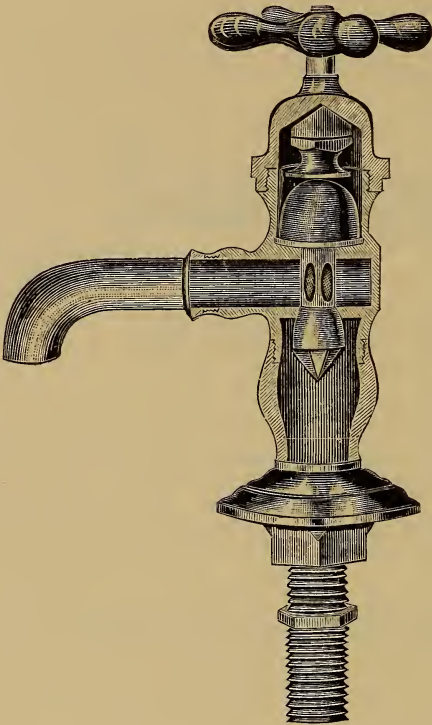
STOPS FOR IRON PIPE.

Fig. 277. (Not illustrated.)

| Size, inches .....                 | $\frac{1}{2}$ | $\frac{5}{8}$ |
|------------------------------------|---------------|---------------|
| Price, Finished, per doz.....      | 30.00         | 33.00         |
| Price, Nickel Plated, per doz..... | 45.00         | 48.00         |
| Price, Silver Plated, per doz..... | 48.00         | 56.00         |



PRIER'S SELF-CLOSING WORK.



BASIN COCK.

Fig. 278.

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|                                    |       |
|------------------------------------|-------|
| Price, Finished, per doz.....      | 45.00 |
| Price, Nickel Plated, per doz..... | 48.00 |
| Price, Silver Plated, per doz..... | 60.00 |

---

URINAL COCK.

Fig. 279. (Not illustrated.)

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|                                    |       |
|------------------------------------|-------|
| Price, Finished, per doz.....      | 36.00 |
| Price, Nickel Plated, per doz..... | 48.00 |
| Price, Silver Plated, per doz..... | 60.00 |

---

PANTRY COCK.

Fig. 280. (Not illustrated.)

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|                                    |       |
|------------------------------------|-------|
| Price, Finished, per doz.....      | 62.00 |
| Price, Nickel Plated, per doz..... | 71.00 |
| Price, Silver Plated, per doz..... | 75.00 |

---

ZANE OR BOSTON SELF-CLOSING WORK.

PLAIN BIBB FOR LEAD PIPE.

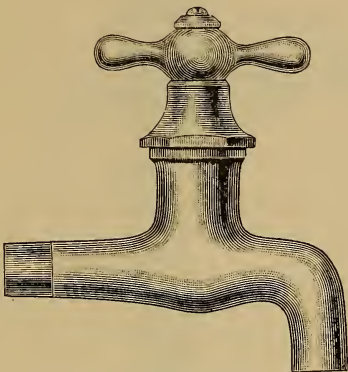


Fig. 281.

| Size, inches.....                  | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | 1     |
|------------------------------------|---------------|---------------|---------------|-------|
| Price, Finished, per doz.....      | 21.00         | 24.00         | 27.00         | 72.00 |
| Price, Nickel Plated, per doz..... | 36.00         | 39.00         | 42.00         | ..... |
| Price, Silver Plated, per doz..... | 39.00         | 42.00         | 51.00         | ..... |

PLAIN BIBB FOR IRON PIPE.

Fig. 282. (Not illustrated).

| Size, inches.....                  | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{3}{4}$ | 1     |
|------------------------------------|---------------|---------------|---------------|-------|
| Price, Finished, per doz.....      | 25.00         | 28.00         | 31.00         | 78.00 |
| Price, Nickel Plated, per doz..... | 40.00         | 43.00         | 46.00         | ..... |
| Price, Silver Plated, per doz..... | 43.00         | 46.00         | 55.00         | ..... |

STOP FOR LEAD PIPE.

Fig. 283. (Not illustrated.)

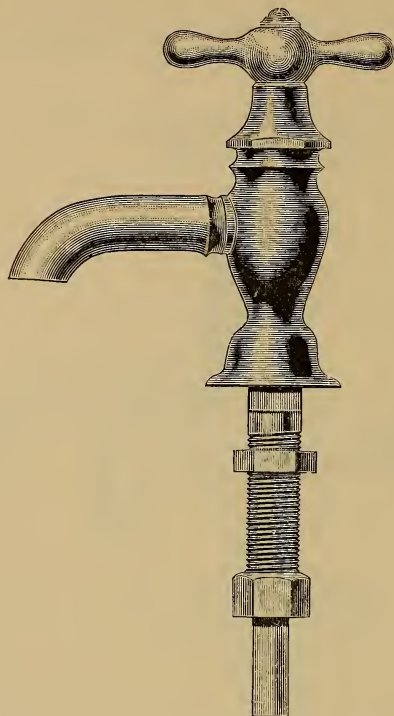
| Size, inches.....                  | $\frac{1}{2}$ | $\frac{5}{8}$ |
|------------------------------------|---------------|---------------|
| Price, Finished, per doz.....      | 24.00         | 27.00         |
| Price, Nickel Plated, per doz..... | 39.00         | 42.00         |
| Price, Silver Plated, per doz..... | 42.00         | 51.00         |

STOP FOR IRON PIPE.

Fig. 284. (Not illustrated).

| Size, inches.....                  | $\frac{1}{2}$ | $\frac{5}{8}$ |
|------------------------------------|---------------|---------------|
| Price, Finished, per doz.....      | 32.00         | 35.00         |
| Price, Nickel Plated, per doz..... | 47.00         | 50.00         |
| Price, Silver Plated, per doz..... | 50.00         | 59.00         |

## ZANE OR BOSTON SELF-CLOSING WORK.



**BASIN COCK.**

Fig. 285.

|                                    |       |
|------------------------------------|-------|
| Price, Finished, per doz.....      | 45.00 |
| Price, Nickel Plated, per doz..... | 48.00 |
| Price, Silver Plated, per doz..... | 60.00 |

### URINAL COCK.

Fig. 286. (Not illustrated.)

|                                    |               |
|------------------------------------|---------------|
| Size, inches.....                  | $\frac{1}{2}$ |
| Price, Finished, per doz.....      | 36.00         |
| Price, Nickel Plated, per doz..... | 48.00         |
| Price, Silver Plated, per doz..... | 60.00         |

### PANTRY COCK.

Fig. 287. (Not illustrated.)

|                                    |       |
|------------------------------------|-------|
| Price, Finished, per doz.....      | 54.00 |
| Price, Nickel Plated, per doz..... | 64.00 |
| Price, Silver Plated, per doz..... | 72.00 |

### HOPPER COCK WITH PLATES AND HANDLES.

Fig. 288. (Not illustrated.)

|                     |               |
|---------------------|---------------|
| Size, inches.....   | $\frac{5}{8}$ |
| Price, per doz..... | 60.00         |

### LONG HOPPER COCK.

Fig. 289. (Not illustrated.)

|                     |               |
|---------------------|---------------|
| Size, inches.....   | $\frac{5}{8}$ |
| Price, per doz..... | 30.00         |

## DOHERTY'S SELF-CLOSING WORK.

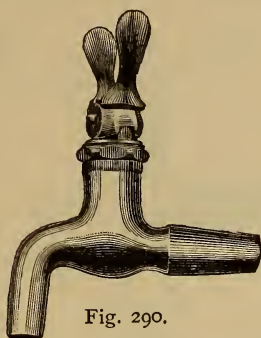


Fig. 290.

## PLAIN BIBBS, FOR LEAD PIPE.

| Size, inches.....                  | $\frac{1}{2}$ | $\frac{5}{8}$ |
|------------------------------------|---------------|---------------|
| Price, Finished, per doz.....      | 24.00         | 27.00         |
| Price, Nickel Plated, per doz..... | 37.50         | 40.00         |
| Price, Silver Plated, per doz..... | 40.00         | 48.00         |

## PLAIN BIBBS, FOR IRON PIPE.

Fig. 291. (Not illustrated).

| Size, inches.....                  | $\frac{1}{2}$ | $\frac{3}{4}$ |
|------------------------------------|---------------|---------------|
| Price, Finished, per doz.....      | 27.00         | 30.00         |
| Price, Nickel Plated, per doz..... | 40.00         | 45.00         |
| Price, Silver Plated, per doz..... | 44.00         | 52.00         |

## BASIN COCKS.

Fig. 292. (Not illustrated).

|                                    |       |
|------------------------------------|-------|
| Price, Finished, per doz.....      | 42.00 |
| Price, Nickel Plated, per doz..... | 48.00 |
| Price, Silver Plated, per doz..... | 56.00 |

## URINAL COCKS.

Fig. 293. (Not illustrated).

|                                    |       |
|------------------------------------|-------|
| Price, Finished, per doz.....      | 35.00 |
| Price, Nickel Plated, per doz..... | 45.00 |
| Price, Silver Plated, per doz..... | 60.00 |

## PANTRY COCKS.

Fig. 294. (Not illustrated).

|                                    |       |
|------------------------------------|-------|
| Price, Finished, per doz.....      | 60.00 |
| Price, Nickel Plated, per doz..... | 69.00 |
| Price, Silver Plated, per doz..... | 72.00 |
| Hose Ends, extra.....              | 4.00  |

## STOPS, FOR LEAD PIPE.

Fig. 295. (Not illustrated).

| Size, inches.....                  | $\frac{1}{2}$ | $\frac{5}{8}$ |
|------------------------------------|---------------|---------------|
| Price, Finished, per doz.....      | 24.00         | 27.00         |
| Price, Nickel Plated, per doz..... | 37.50         | 40.00         |
| Price, Silver Plated, per doz..... | 40.00         | 48.00         |

## STOPS, FOR IRON PIPE.

Fig. 296. (Not illustrated).

| Size, inches.....                  | $\frac{1}{2}$ | $\frac{5}{8}$ |
|------------------------------------|---------------|---------------|
| Price, Finished, per doz.....      | 30.00         | 33.00         |
| Price, Nickel Plated, per doz..... | 45.00         | 48.00         |
| Price, Silver Plated, per doz..... | 48.00         | 56.00         |

## HOPPER COCKS, FINISHED FLANGE AND HANDLE.

Fig. 297. (Not illustrated).

|           |                   |       |
|-----------|-------------------|-------|
| Lead..... | 28.00   Iron..... | 30.00 |
|-----------|-------------------|-------|

## BALL COCKS.—Including Weighted Ball.

Fig. 298. (Not illustrated).

|                               |                                       |       |
|-------------------------------|---------------------------------------|-------|
| Lead, $\frac{1}{2}$ inch..... | 31.00   Iron, $\frac{1}{2}$ inch..... | 34.00 |
|-------------------------------|---------------------------------------|-------|



TELEGRAPH PLAIN BIBB.

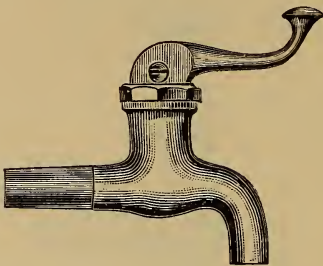


Fig. 299.

| Size, inches.....                  | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ |
|------------------------------------|---------------|---------------|---------------|---------------|
| Price, Finished, per doz.....      | 15.00         | 17.00         | 20.00         | 26.00         |
| Price, Nickel Plated per doz.....  | 17.00         | 19.50         | 22.50         | 28.50         |
| Price, Silver Plated, per doz..... | 23.00         | 26.00         | 32.00         | 41.00         |

TELEGRAPH PLAIN BIBB, SCREWED FOR IRON PIPE.

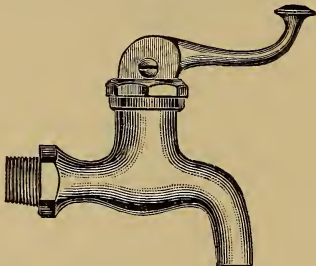


Fig. 300.

| Size, inches.....                  | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ |
|------------------------------------|---------------|---------------|---------------|---------------|
| Price, Finished, per doz.....      | 16.00         | 18.00         | 21.00         | 28.00         |
| Price, Nickel Plated, per doz..... | 18.00         | 20.50         | 23.50         | 30.50         |
| Price, Silver Plated, per doz..... | 24.00         | 27.00         | 33.00         | 43.00         |

TELEGRAPH COOLER COCK.

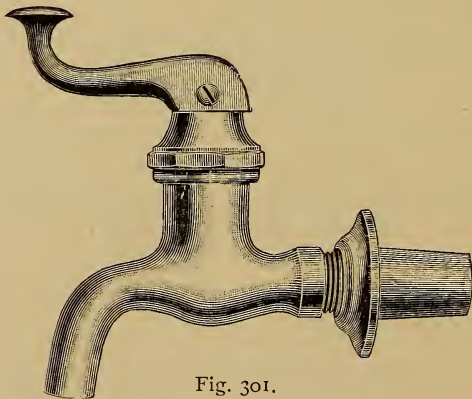


Fig. 301.

| Size, inches.....                  | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ |
|------------------------------------|---------------|---------------|---------------|
| Price, Finished, per doz.....      | 14.00         | 16.00         | 19.00         |
| Price, Nickel Plated, per doz..... | 16.00         | 18.50         | 21.50         |
| Price, Silver Plated, per doz..... | 22.00         | 25.00         | 31.00         |

TELEGRAPH BASIN COCK.

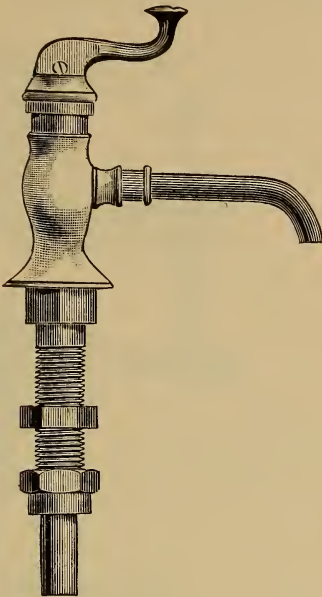


Fig. 302.

|                                    |       |
|------------------------------------|-------|
| Price, Finished, per doz.....      | 24.00 |
| Price, Nickel Plated, per doz..... | 27.00 |
| Price, Silver Plated, per doz..... | 33.00 |

LONG SELF-CLOSING HOPPER COCK.

For Lead Pipe.

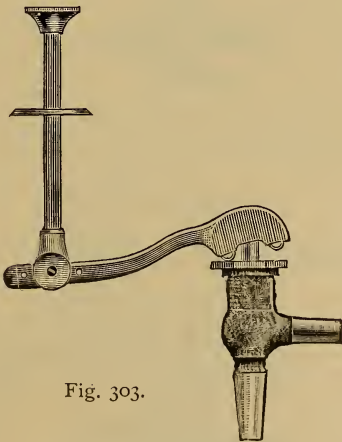


Fig. 303.

| Size, inches.....                                    | 1/2   | 5/8   | 3/4   |
|------------------------------------------------------|-------|-------|-------|
| Price, Finished Flange and Handle, per doz.....      | 24.00 | 26.00 | 30.00 |
| Price, Nickel Plated Flange and Handle, per doz..... | 26.00 | 28.50 | 32.50 |
| Price, Silver Plated Flange and Handle, per doz..... | 33.00 | 38.00 | 45.00 |

LONG SELF-CLOSING HOPPER COCK.

For Iron Pipe. California Pattern.

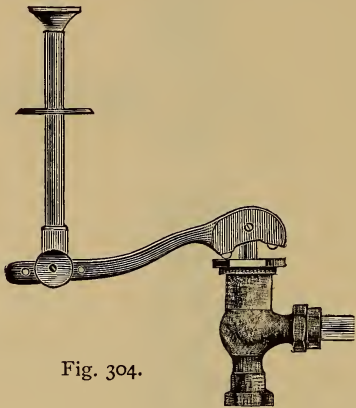


Fig. 304.

|                                                      |       |
|------------------------------------------------------|-------|
| Size, inches.....                                    | 1½    |
| Price, Finished Flange and Handle, per doz.....      | 30.00 |
| Price, Nickel Plated Flange and Handle, per doz..... | 32.50 |
| Price, Silver Plated Flange and Handle, per doz..... | 39.00 |

SELF-CLOSING HOPPER COCK.

Single.

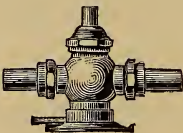


Fig. 305.

|                     |       |
|---------------------|-------|
| Price, per doz.. .. | 26.00 |
|---------------------|-------|

SELF-CLOSING HOPPER COCK.

Double.

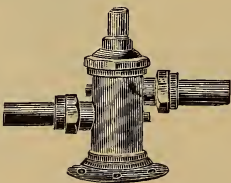


Fig. 306.

|                     |       |
|---------------------|-------|
| Price, per doz..... | 40.00 |
|---------------------|-------|

## FULLER WORK.

### FULLER FLAIN BIBB.

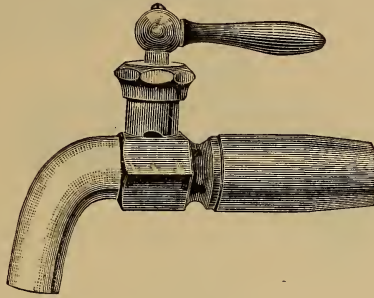


Fig. 307.

| Size, inches.....                  | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     | $1\frac{1}{4}$ |
|------------------------------------|---------------|---------------|---------------|---------------|-------|----------------|
| Price, Finished, per doz.....      | 16.00         | 18.00         | 20.00         | 26.00         | 36.00 | 56.00          |
| Price, Nickel Plated, per doz..... | 20.00         | 22.00         | 24.00         | 32.00         | 46.00 | 70.00          |
| Price, Silver Plated, per doz..... | 28.00         | 34.00         | 40.00         | 50.00         | 64.00 | 85.00          |

### FULLER HOSE BIBB.

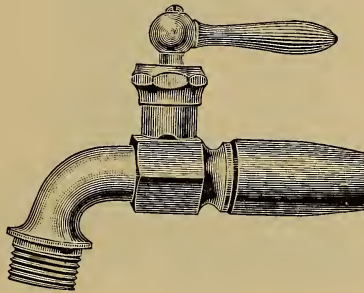


Fig. 308.

| Size, inches.....                  | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
|------------------------------------|---------------|---------------|---------------|-------|
| Price, Finished, per doz.....      | 21.00         | 24.00         | 30.00         | 38.00 |
| Price, Nickel Plated, per doz..... | 25.00         | 28.00         | 36.00         | 48.00 |
| Price, Silver Plated, per doz..... | 37.00         | 44.00         | 54.00         | 66.00 |

### FULLER PLAIN BIBB FOR IRON PIPE.

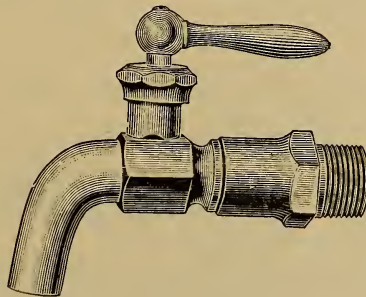


Fig. 309.

| Size, inches.....                  | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
|------------------------------------|---------------|---------------|---------------|-------|
| Price, Finished, per doz.....      | 21.00         | 24.00         | 30.00         | 40.00 |
| Price, Nickel Plated, per doz..... | 25.00         | 28.00         | 35.00         | 48.00 |
| Price, Silver Plated, per doz..... | 31.00         | 36.00         | 44.00         | 64.00 |



## FULLER HOSE BIBB, FOR IRON PIPE.

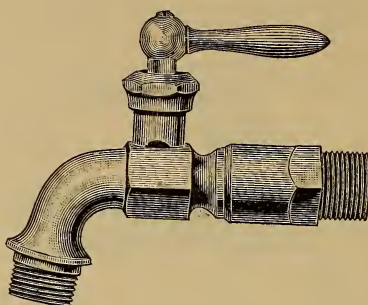


Fig. 310.

| Size, inches.....                  | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
|------------------------------------|---------------|---------------|---------------|-------|
| Price, Finished, per doz.....      | 24.00         | 27.00         | 32.00         | 42.00 |
| Price, Nickel Plated, per doz..... | 28.00         | 31.00         | 37.00         | 50.00 |
| Price, Silver Plated per doz.....  | 34.00         | 39.00         | 46.00         | 66.00 |

## FULLER PLAIN BIBB, FLANGE AND THIMBLE.

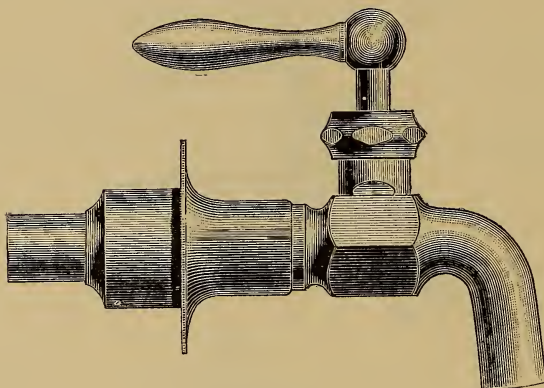


Fig. 311.

| Size, inches.....                  | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
|------------------------------------|---------------|---------------|---------------|---------------|-------|
| Price, Finished, per doz.....      | 23.00         | 26.00         | 28.00         | 36.00         | 48.00 |
| Price, Nickel Plated, per doz..... | 28.00         | 32.00         | 34.00         | 42.00         | 58.00 |
| Price, Silver Plated, per doz..... | 36.00         | 42.00         | 46.00         | 56.00         | 75.00 |
| Add if with Hose End. per doz..... | .....         | 3.00          | 4.00          | 4.00          | 4.00  |

## FULLER WASH-TRAY COCK.

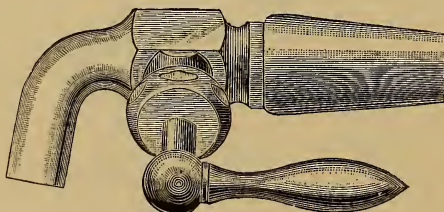


Fig. 312.

| Size, inches.....             | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
|-------------------------------|---------------|---------------|---------------|-------|
| Price, Finished, per doz..... | 20.00         | 22.50         | 30.00         | 40.00 |

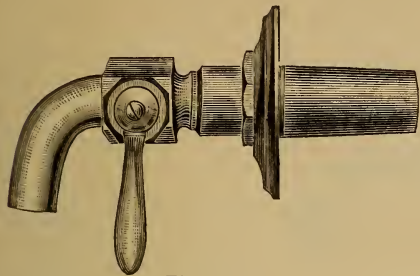


Fig. 313.

FULLER WASH TRAY COCK.

With Flange and Thimble.

|                               |               |               |               |       |
|-------------------------------|---------------|---------------|---------------|-------|
| Size, inches .....            | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
| Price, Finished, per doz..... | 26.00         | 28.00         | 36.00         | 50.00 |

FULLER UPRIGHT BATH BIBB.

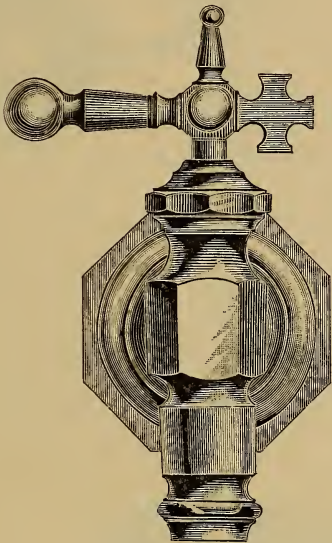


Fig. 314.

|                                    |               |               |               |       |
|------------------------------------|---------------|---------------|---------------|-------|
| Size, inches .....                 | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
| Price, Finished, per doz.....      | 25.00         | 28.00         | 34.00         | 48.00 |
| Price, Nickel Plated, per doz..... | 31.00         | 34.00         | 40.00         | 56.00 |
| Price, Silver Plated, per doz..... | 40.00         | 44.00         | 54.00         | 80.00 |

FULLER PLAIN STOP.

With Couplings.

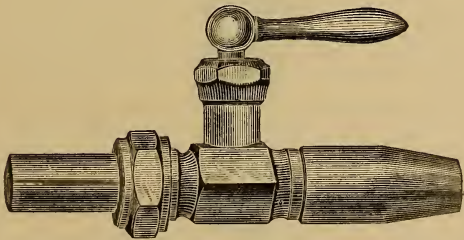


Fig. 315.

|                               |               |               |               |       |                |                |        |
|-------------------------------|---------------|---------------|---------------|-------|----------------|----------------|--------|
| Size, inches .....            | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2      |
| Price, Finished, per doz..... | 20.00         | 24.00         | 28.00         | 40.00 | 65.00          | 75.00          | 150.00 |

## IMPROVED BALL COCK.

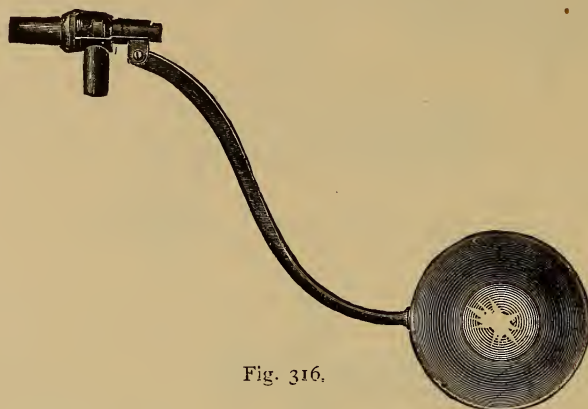


Fig. 316.

| Size, inches .....                            | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     |
|-----------------------------------------------|---------------|---------------|---------------|-------|
| Price, with Ball, for Lead Pipe, per doz..... | 27.00         | 34.00         | 50.00         | 60.00 |
| Price, with Ball for Iron Pipe, per doz.....  | 32.00         | 38.00         | 56.00         | 68.00 |
| Ball extra, each, net.....                    |               |               | 1.50          | 8.00  |

## FULLER BASIN COCK.

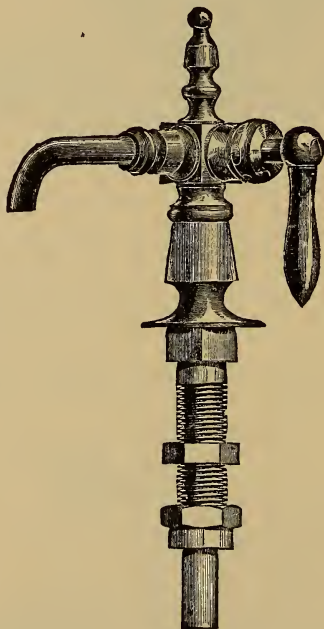


Fig. 317.

No. 1.

|                                    |       |
|------------------------------------|-------|
| Price, Finished, per doz.....      | 33.00 |
| Price, Nickel Plated, per doz..... | 40.00 |
| Price, Silver Plated, per doz..... | 46.00 |

FULLER BASIN COCKS.

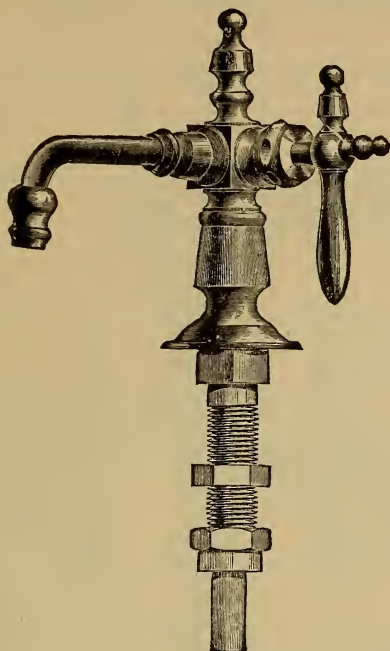


Fig. 318. No. 2.

|                                     |       |
|-------------------------------------|-------|
| Price, Brass, per doz. ....         | 36.00 |
| Price, Nickel Plated, per doz. .... | 44.00 |
| Price, Silver Plated, per doz. .... | 50.00 |

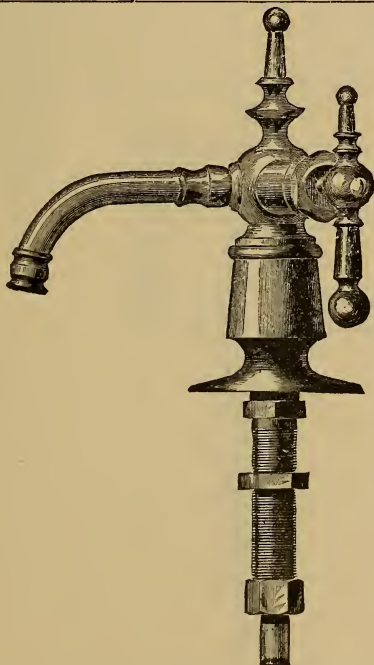


Fig. 319. No. 3.

|                                       |       |
|---------------------------------------|-------|
| Price, Brass, Finished, per doz. .... | 46.00 |
| Price, Nickel Plated, per doz. ....   | 54.00 |
| Price, Silver Plated, per doz. ....   | 60.00 |



FULLER BASIN COCKS.

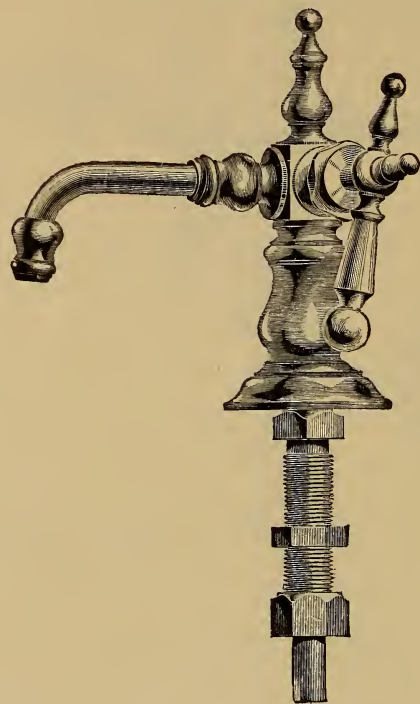


Fig. 320. No. 4.

|                                    |       |
|------------------------------------|-------|
| Price, Finished, per doz.....      | 56.00 |
| Price, Nickel Plated, per doz..... | 64.00 |
| Price, Silver Plated, per doz..... | 70.00 |

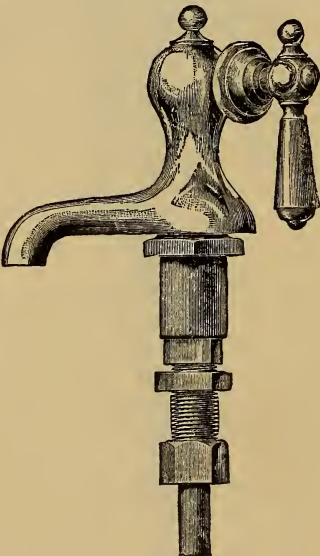


Fig. 321. With Low Down Outlet.

|                                    |       |
|------------------------------------|-------|
| Price, Finished, per doz.....      | 54.00 |
| Price, Nickel Plated, per doz..... | 60.00 |
| Price, Silver Plated, per doz..... | 65.00 |

## FULLER DOUBLE BASIN COCKS.

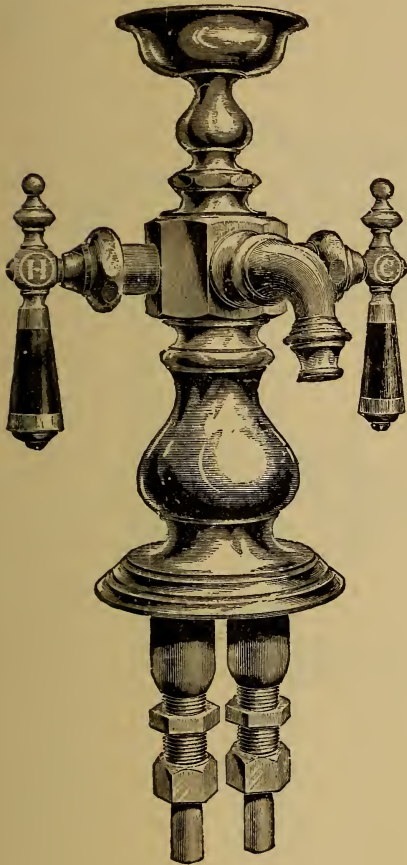


Fig. 322.

Number 9.

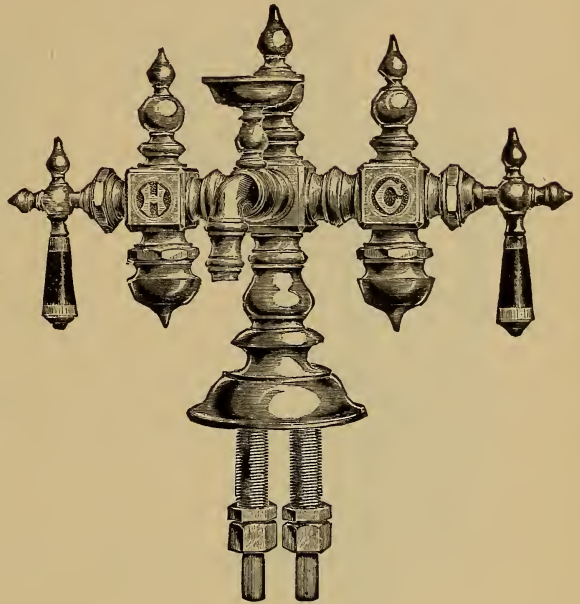


Fig. 323.

Number 10.

| Number.....                          | 9     | 10    |
|--------------------------------------|-------|-------|
| Price, Finished, each....            | 16.00 | 24.00 |
| Price, Nickel Plated, each.....      | 18.00 | 28.00 |
| Price, Silver Plated, each.....      | 20.00 | 32.00 |
| With Ebony or Ivory Handles add..... | 3.00  | 3.00  |

Fuller Double Basin Cock.

Fuller Double Shampoo Cock.

No. 8.

No. 9.

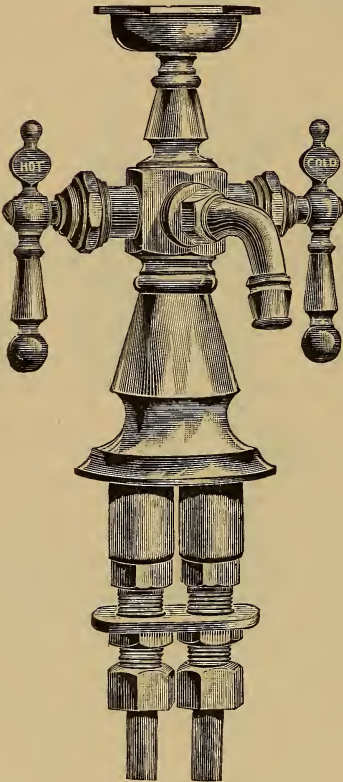


Fig. 324.

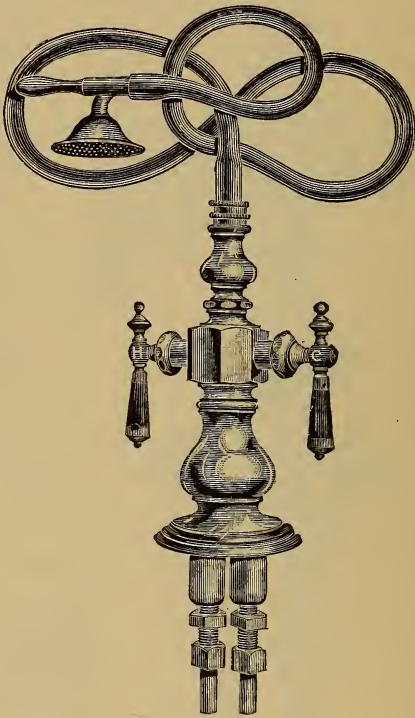


Fig. 325.

|                                           |       |
|-------------------------------------------|-------|
| Price, Fig. 324, Finished, each.....      | 12.00 |
| Price, Fig. 324, Nickel Plated, each..... | 13.00 |
| Price, Fig. 324, Silver Plated, each..... | 15.00 |

| Number....                                               | 8     | 9     |
|----------------------------------------------------------|-------|-------|
| Price, Fig. 325, Finished, each...                       | 13.00 | 17.00 |
| Price, Fig. 325, Nickel Plated, each.....                | 14.00 | 19.00 |
| Price, Fig. 325, Silver Plated, each.....                | 16.00 | 21.00 |
| Price, Fig. 325, with Ebony or Ivory Handles, add, each. | 3.00  | 3.00  |

No. 8 Shampoo Cock has same style Body as Fig. 324 Basin Cock.

FULLER PANTRY COCK.

Fig. 326.

| Number .....                       | 1     | 2     | 3     |
|------------------------------------|-------|-------|-------|
| Price, Finished, per doz.....      | 36.00 | 42.00 | 50.00 |
| Price, Nickel Plated, per doz..... | 42.00 | 50.00 | 60.00 |
| Price, Silver Plated, per doz..... | 50.00 | 60.00 | 70.00 |

FULLER DOUBLE PANTRY COCK.

Fig. 327.

| Number .....                    | 8     | 9     |
|---------------------------------|-------|-------|
| Price, Finished, each.....      | 12.00 | 16.00 |
| Price, Nickel Plated, each..... | 13.00 | 18.00 |
| Price, Silver Plated, each..... | 15.00 | 20.00 |

FULLER WORK TRIMMINGS.

Eccentric.



Fig. 328.

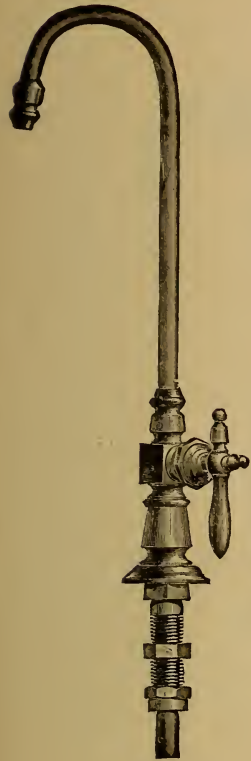


Fig. 326.

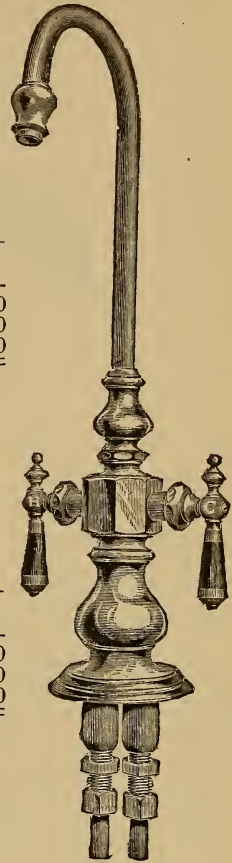


Fig. 327.

| Size, inches.....   | $\frac{1}{2}$ & $\frac{5}{8}$ | $\frac{3}{4}$ | 1    |
|---------------------|-------------------------------|---------------|------|
| Price, per doz..... | 3.00                          | 4.00          | 6.00 |

Rubber Ball.



Fig. 329.

Ball Stem, with Ball.



Fig. 330.

| Size, inches.....   | $\frac{1}{2}$ & $\frac{5}{8}$ | $\frac{3}{4}$ | 1    |
|---------------------|-------------------------------|---------------|------|
| Price, per doz..... | .75                           | 1.00          | 1.25 |

| Size, inches.....   | $\frac{1}{2}$ & $\frac{5}{8}$ | $\frac{3}{4}$ | 1    |
|---------------------|-------------------------------|---------------|------|
| Price, per doz..... | 3.00                          | 4.00          | 6.00 |



## FULLER COMBINATION BATH COCK.

Complete, with Sprinkler.

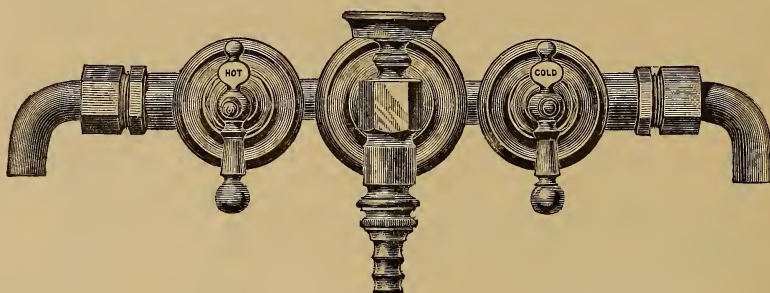


Fig. 331.

No. 1.

---

|                                              |       |
|----------------------------------------------|-------|
| Price, Finished, each.....                   | 10.50 |
| Price, Nickel Plated, each.....              | 12.00 |
| Price, Silver Plated, extra heavy, each..... | 14.00 |

---

## FULLER COMBINATION BATH COCK.

Complete, with Sprinkler.

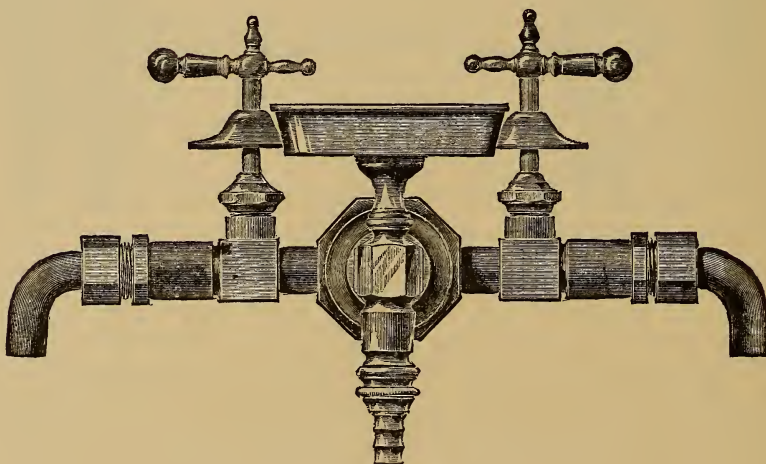


Fig. 332.

No. 2.

---

|                                              |       |
|----------------------------------------------|-------|
| Price, Finished, each.....                   | 13.00 |
| Price, Nickel Plated, each.....              | 14.00 |
| Price, Silver Plated, extra heavy, each..... | 16.00 |

---

No. 2½, same style Handles in front, same price.

## FULLER COMBINATION BATH COCK.

Complete With Sprinkler.

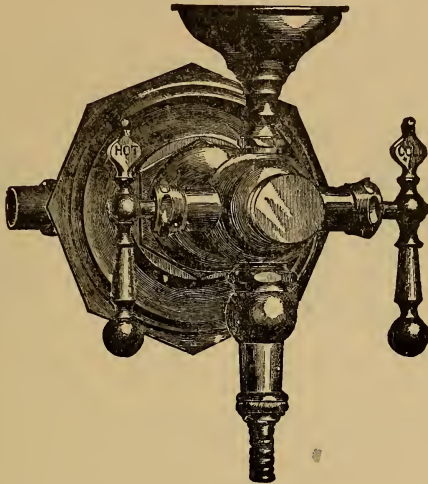


Fig. 333.

No. 3.

---

|                                              |       |
|----------------------------------------------|-------|
| Price, Finished, each.....                   | 14.00 |
| Price, Nickel Plated, each.....              | 15.50 |
| Price, Silver Plated, extra heavy, each..... | 17.00 |
| Extra for Ebony or Ivory Handles, add.....   | 3.00  |

---

## FULLER COMBINATION BATH COCK.

Complete With Sprinkler.

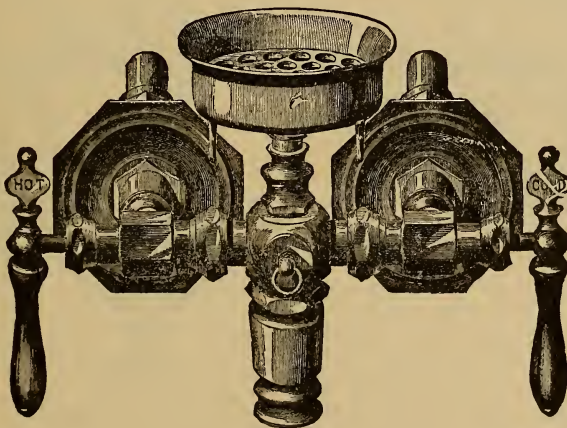


Fig. 334.

No. 4.

---

|                                 |       |
|---------------------------------|-------|
| Price, Finished, each.....      | 18.00 |
| Price, Nickel Plated, each..... | 21.00 |
| Price, Silver Plated, each..... | 23.00 |

---

## INLAID FULLER WORK.

### Combination Supply for Hip Bath.

HANDLES MOUNTED WITH IVORY.

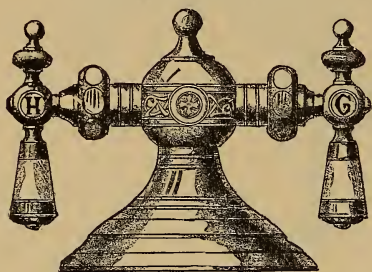


Fig. 335.

### Secret Waste for Hip Bath.

HANDLES MOUNTED WITH EBONY.

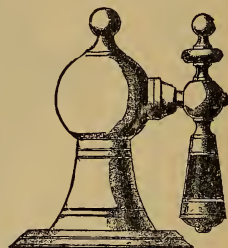


Fig. 336.

|                                             |       |                                            |       |
|---------------------------------------------|-------|--------------------------------------------|-------|
| Price, Plain Silver Plated, each.....       | 20.00 | Price, Plain Silver Plated, each.....      | 10.00 |
| Price added for Engraving, each.....        | 6.00  | Price added for Ivory or Ebony Handle....  | 1.00  |
| Price added for Ivory or Ebony Handles. . . | 2.00  | Added for Stone Handles, Jasper or Onyx. . | 10.00 |
| Added for Stone Handles, Jasper or Onyx..   | 20.00 | .....                                      | ..... |

## COMBINATION BRACKET SHAMPOO COCK.

Handles Mounted with Onyx.

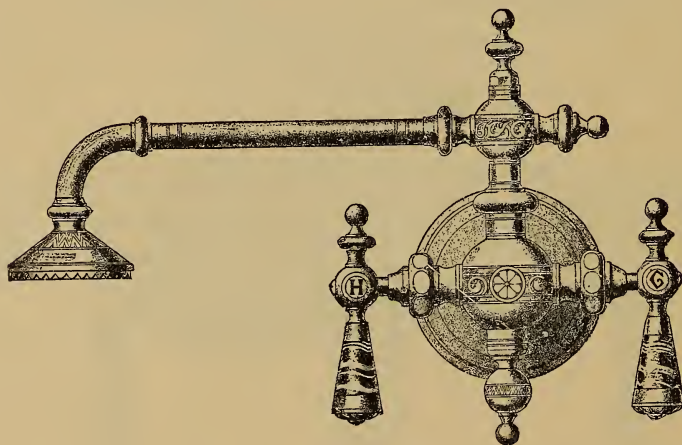


Fig. 337.

|                                                          |       |
|----------------------------------------------------------|-------|
| Price, Plain Silver Plated, each.....                    | 40.00 |
| Price added for Engraving, each.....                     | 8.00  |
| Price added for Ivory or Ebony Handles, each.....        | 2.00  |
| Price added for Stone Handles, Jasper or Onyx, each..... | 20.00 |



COMBINATION SHOWER COCK AND SPRINKLER.

Handles Mounted with Onyx.

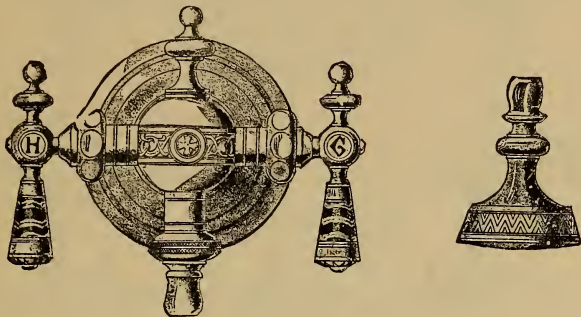


Fig. 338.

|                                                          |       |
|----------------------------------------------------------|-------|
| Price, Plain Silver Plated, each.....                    | 20.00 |
| Price added for Engraving, each.....                     | 7.00  |
| Price added for Ivory or Ebony Handles, each .....       | 2.00  |
| Price added for Stone Handles, Jasper or Onyx, each..... | 20.00 |

Secret Supply for Plunge Bath.

HANDLES MOUNTED WITH IVORY.

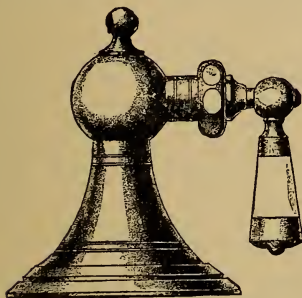


Fig. 339.

Combination Bath Cock.

HANDLES MOUNTED WITH JASPER.

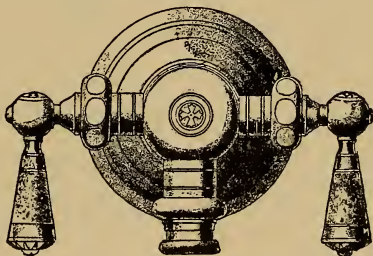


Fig. 340.

|                                            |       |                                            |       |
|--------------------------------------------|-------|--------------------------------------------|-------|
| Price, Plain Silver Plated, each.....      | 12.00 | Price, Plain Silver Plated, each....       | 20.00 |
| Price added for Ivory or Ebony Handles.... | 1.00  | Price added for Engraving, each.....       | 6.00  |
| Added for Stone Handles, Jasper or Onyx..  | 10.00 | Price added for Ivory or Ebony Handles...  | 2.00  |
| .....                                      | ..... | Added for Stone Handles, Jasper or Onyx..  | 20.00 |
| .....                                      | ..... | Price added for Soap Tray, Plain, each.... | 4.00  |
| .....                                      | ..... | Price added for Soap Tray, Engraved, each  | 6.00  |



## BASIN COCK, SOAP TRAY AND SECRET WASTE.

Handles Mounted with Jasper.

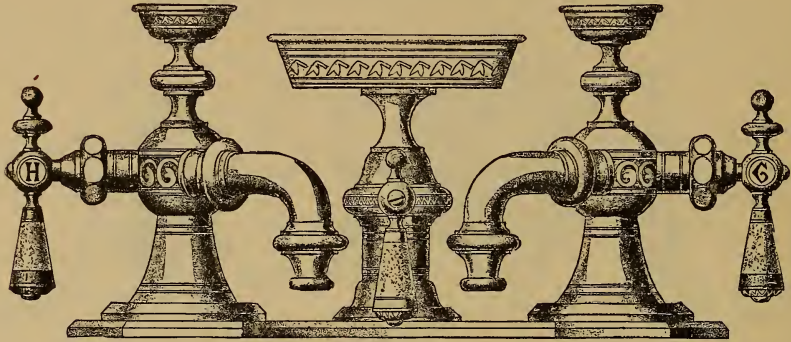


Fig. 341.

|                                                              |       |
|--------------------------------------------------------------|-------|
| Price, Plain, Silver Plated, per set.....                    | 50.00 |
| Price added for Engraving, per set.....                      | 10.00 |
| Price added for Ivory or Ebony Handles, per set.....         | 3.00  |
| Price added for Stone Handles, Jasper or Onyx, per set ..... | 30.00 |
| Price, Basin Cock only, each.....                            | 16.00 |
| Price added for Engraving, each.....                         | 4.00  |
| Price added for Ivory or Ebony Handles, each.....            | 1.00  |
| Price added for Stone Handles, Jasper or Onyx, each .....    | 10.00 |
| Price, Secret Waste only, each.....                          | 15.00 |
| Price added for Engraving, each.....                         | 3.00  |
| Price added for Ivory or Ebony Handles, each.....            | 1.00  |
| Price added for Stone Handles, Jasper or Onyx, each.....     | 10.00 |

# MISCELLANEOUS BRASS WORK.

## HOSE NOZZLE, TO TIE ON.

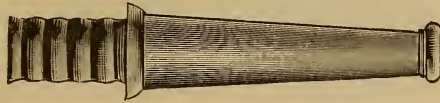


Fig. 342.

|                     |                |                |
|---------------------|----------------|----------------|
| Size, inches.....   | $\frac{3}{4}$  | 1              |
| Length, inches..... | $4\frac{1}{2}$ | $4\frac{1}{2}$ |
| Price, per doz..... | 3.50           | 4 00           |

## HOSE PIPE, PLAIN SCREW TIP.



Fig. 343.

|                     |               |               |       |       |                |                |                |                |       |       |                |                |
|---------------------|---------------|---------------|-------|-------|----------------|----------------|----------------|----------------|-------|-------|----------------|----------------|
| Size, inches....    | $\frac{3}{4}$ | $\frac{3}{4}$ | 1     | 1     | $1\frac{1}{4}$ | $1\frac{1}{4}$ | $1\frac{1}{2}$ | $1\frac{1}{2}$ | 2     | 2     | $2\frac{1}{2}$ | $2\frac{1}{2}$ |
| Length, inches..... | 8             | 12            | 8     | 12    | 12             | 15             | 12             | 15             | 12    | 20    | 15             | 24             |
| Price, per doz..... | 8.00          | 10.00         | 10.00 | 12.00 | 20.00          | 24.00          | 25 00          | 30.00          | 38.00 | 50.00 | 75.00          | 100.00         |

## HOSE PIPE, SHORT, COCK LARGE END, CAST.

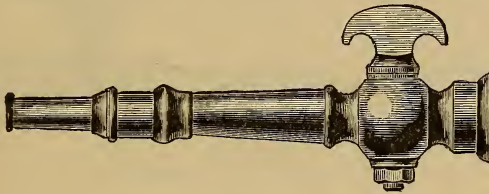


Fig. 344.

|                     |               |               |       |       |                |                |        |
|---------------------|---------------|---------------|-------|-------|----------------|----------------|--------|
| Size, inches....    | $\frac{3}{4}$ | $\frac{3}{4}$ | 1     | 1     | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2      |
| Length, inches..... | 8             | 12            | 8     | 12    | 20             | 20             | 20     |
| Price, per doz..... | 13.00         | 18.00         | 15.00 | 20.00 | 55.00          | 80.00          | 110.00 |

## NIAGARA COMPRESSION HOSE PIPE.

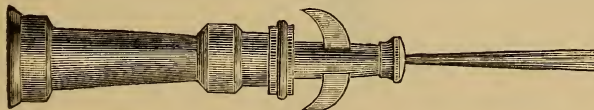


Fig. 345.

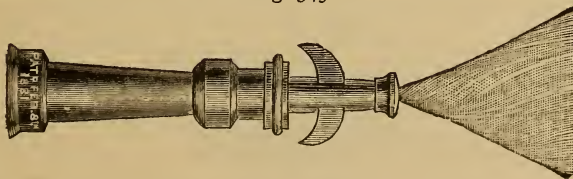


Fig. 346.

|                     |               |       |
|---------------------|---------------|-------|
| Size, inches.....   | $\frac{3}{4}$ | 1     |
| Price, per doz..... | 9 00          | 12.00 |

GEM SPRAY HOSE PIPE.

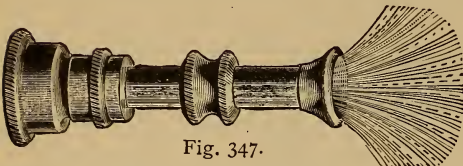


Fig. 347.

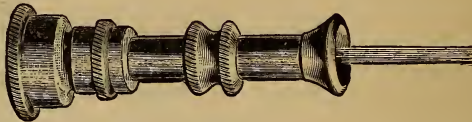


Fig. 348.

|                     |               |
|---------------------|---------------|
| Size, inches.....   | $\frac{3}{4}$ |
| Price, per doz..... | 9.00          |

FULLER HOSE PIPE.

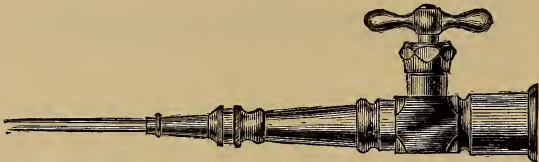


Fig. 349.

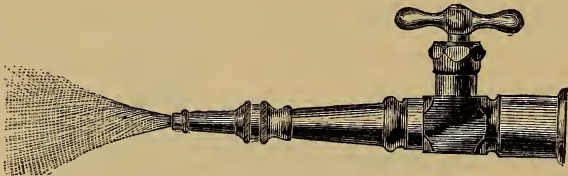


Fig. 350.

|                     |               |       |
|---------------------|---------------|-------|
| Size, inches.....   | $\frac{3}{4}$ | 1     |
| Price, per doz..... | 18.00         | 30.00 |

DAISY LAWN SPRINKLER.

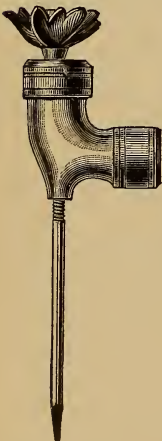


Fig. 351.



Fig. 352.

|                                |               |
|--------------------------------|---------------|
| Size, inches.....              | $\frac{3}{4}$ |
| Price, Fig. 351, per doz.....  | 9.00          |
| Price, Fig. 352, per doz. .... | 6.00          |

LAWN SPRINKLERS.

Fig. 353.

|                                                 |      |
|-------------------------------------------------|------|
| Price each, Four Arm, Nickel-Plated Head.....   | 6.50 |
| Price each, Eight Arm, Nickel Plated Head ..... | 7.50 |
| With Basket and Ball Top, add.....              | 6.50 |



Fig. 353.

### HOSE SPRINKLERS.



Fig. 354.

|                                              |      |      |
|----------------------------------------------|------|------|
| Diameter, inches. ....                       | 1½   | 2    |
| Price, per doz. for ¾ and 1 inch Pipes ..... | 3.50 | 4.50 |

### SHAMPOOING SPRINKLERS.

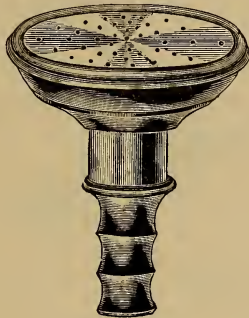


Fig. 355.

|                                     |       |
|-------------------------------------|-------|
| Price, Finished, per doz. ....      | 8.00  |
| Price, Nickel Plated, per doz. .... | 10.00 |
| Price, Silver Plated, per doz ...   | 12.00 |

### HOSE COUPLINGS.



Fig. 356.

|                                  |      |      |      |       |       |       |       |       |        |        |        |        |
|----------------------------------|------|------|------|-------|-------|-------|-------|-------|--------|--------|--------|--------|
| Size, inches. ....               | ½    | ¾    | 1    | 1¼    | 1½    | 2     | 2½    | 3     | 3½     | 4      | 5      | 6      |
| Price, per doz. ....             | 2.40 | 2.40 | 4.40 | 10.00 | 14.00 | 24.00 | 48.00 | 76.00 | .....  | .....  | .....  | .....  |
| Price, for Iron Pipe, per doz. . | 2.65 | 2.65 | 4.65 | 10.50 | 15.00 | 26.00 | 50.00 | 79.00 | 120.00 | 150.00 | 250.00 | 450.00 |

For either part of Coupling. two-thirds list price.

### HOSE CLAMPS.



Fig. 357.

|                      |      |      |      |      |      |      |      |       |
|----------------------|------|------|------|------|------|------|------|-------|
| Size, inches .....   | ½    | ¾    | 1    | 1¼   | 1½   | 2    | 2½   | 3     |
| Price, per doz. .... | 1.50 | 1.50 | 2.00 | 2 50 | 3.00 | 4.00 | 7.00 | 10.00 |



CALDWELL HOSE BANDS.



Fig. 358.

| No. |                                               | Per doz. | No. |                                                | Per doz. |
|-----|-----------------------------------------------|----------|-----|------------------------------------------------|----------|
| 2,  | $\frac{1}{2}$ inch, $3\frac{3}{8}$ inch long. | .40      | 20, | $1\frac{1}{2}$ inch, $7\frac{1}{8}$ inch long. | 1.20     |
| 4,  | $\frac{1}{2}$ " $3\frac{3}{4}$ "              | .40      | 22, | $1\frac{3}{4}$ " $7\frac{1}{2}$ "              | 1.40     |
| 6,  | $\frac{3}{4}$ " $4\frac{1}{8}$ "              | .60      | 24, | $1\frac{3}{4}$ " 8 "                           | 1.40     |
| 8,  | $\frac{3}{4}$ " $4\frac{3}{4}$ "              | .60      | 26, | 2 " $8\frac{1}{2}$ "                           | 1.60     |
| 10, | 1 " 5 "                                       | .80      | 28, | 2 " 9 "                                        | 1.60     |
| 12, | 1 " $5\frac{3}{8}$ "                          | .80      | 30, | $2\frac{1}{4}$ " $9\frac{1}{2}$ "              | 1.80     |
| 14, | $1\frac{1}{4}$ " 6 "                          | 1.00     | 32, | $2\frac{1}{4}$ " 10 "                          | 1.80     |
| 16, | $1\frac{1}{4}$ " $6\frac{3}{8}$ "             | 1.00     | 34, | $2\frac{1}{2}$ " $10\frac{1}{2}$ "             | 2.00     |
| 18, | $1\frac{1}{2}$ " $6\frac{3}{4}$ "             | 1.20     | 36, | $2\frac{1}{2}$ " 11 "                          | 2.00     |

HOSE STRAP FASTENERS.

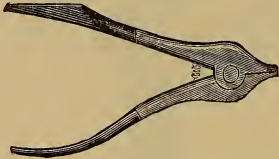


Fig. 359.

|                          |     |                                      |     |
|--------------------------|-----|--------------------------------------|-----|
| $\frac{1}{2}$ to 1 inch. | .50 | $\frac{1}{4}$ to $2\frac{1}{2}$ inch | .75 |
|--------------------------|-----|--------------------------------------|-----|

HOSE SPLICE.

For Mending Hose.



Fig. 360.

|                           |               |               |      |
|---------------------------|---------------|---------------|------|
| Size, inches.             | $\frac{1}{2}$ | $\frac{3}{4}$ | 1    |
| Price, Coppered, per doz. | .40           | .50           | 1.00 |

HOSE NIPPLES.



Fig. 361.



Fig. 362.

|                          |               |               |      |                |                |       |                |       |                |       |
|--------------------------|---------------|---------------|------|----------------|----------------|-------|----------------|-------|----------------|-------|
| Size, inches.            | $\frac{1}{2}$ | $\frac{3}{4}$ | 1    | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2     | $2\frac{1}{2}$ | 3     | $3\frac{1}{2}$ | 4     |
| Price, Fig. 361, per doz | 3.50          | 3.50          | 5.00 | 9.00           | 10.00          | 14.00 | 28.00          | 40.00 | 50.00          | 75.00 |
| Size, inches.            | $\frac{1}{2}$ | $\frac{3}{4}$ | 1    | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2     | $2\frac{1}{2}$ | 3     | $3\frac{1}{2}$ | 4     |
| Price, Fig. 362, per doz | 3.50          | 3.50          | 5.00 | 9.00           | 10.00          | 14.00 | 28.00          | 40.00 | 50.00          | 75.00 |

HOSE REDUCER.

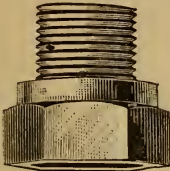


Fig. 363.

HOSE BUSHING.

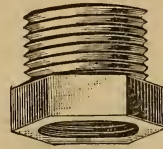


Fig. 364.

|                                |                  |                    |                                  |                   |
|--------------------------------|------------------|--------------------|----------------------------------|-------------------|
| Size, inches .....             | 1x $\frac{3}{4}$ | 1 $\frac{1}{4}$ x1 | 1 $\frac{1}{2}$ x1 $\frac{1}{4}$ | 2x1 $\frac{1}{2}$ |
| Price, Fig. 363, per doz. .... | 6.50             | 10.00              | 12.00                            | 18.00             |
| Size, inches.....              |                  |                    |                                  | 1x $\frac{3}{4}$  |
| Price, Fig. 364, per doz.....  |                  |                    |                                  | 6.50              |

HOSE BIBB END.



Fig. 365.

|                      |               |      |                 |                 |       |                 |
|----------------------|---------------|------|-----------------|-----------------|-------|-----------------|
| Size, inches .....   | $\frac{3}{4}$ | 1    | 1 $\frac{1}{4}$ | 1 $\frac{1}{2}$ | 2     | 2 $\frac{1}{2}$ |
| Price, per doz. .... | 2.50          | 3.50 | 6.00            | 8.00            | 15.00 | 24.00           |

PLAIN COUPLING.



Fig. 366.

|                                            |               |               |               |               |               |       |                 |                 |
|--------------------------------------------|---------------|---------------|---------------|---------------|---------------|-------|-----------------|-----------------|
| Size, inches .....                         | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | $\frac{3}{4}$ | 1     | 1 $\frac{1}{4}$ | 1 $\frac{1}{2}$ |
| Price, Finished, Ground Face, per doz..... | 4.00          | 4.50          | 5.00          | 6.50          | 8.00          | 12.00 | 18.00           | 24.00           |

BOILER COUPLINGS, FOR IRON BOILER.

Straight.



Fig. 367.

Bent.

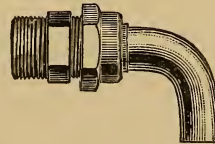


Fig. 368.

|                                                                  |               |               |       |
|------------------------------------------------------------------|---------------|---------------|-------|
| Size, inches.....                                                | $\frac{1}{2}$ | $\frac{3}{4}$ | 1     |
| Price, Plain, Fig. 367, per doz.....                             | 7.50          | 8.00          | 11.00 |
| Price, Ground Face, Fig. 367, per doz.....                       | 8.50          | 9.00          | 12.50 |
| Size, inches.....                                                | $\frac{1}{2}$ | $\frac{3}{4}$ | 1     |
| Price, Plain Face, Fig. 368, per doz.....                        | 8.50          | 9.00          | 12.00 |
| Price, Ground Face, Fig. 368, per doz.....                       | 9.50          | 10.00         | 13.50 |
| Price of one Straight and three Bent, Plain Face, per set .....  | 2.50.....     |               |       |
| Price of one Straight and three Bent, Ground Face, per set ..... | 2.75.....     |               |       |

WATER BACK COUPLINGS.

Straight.



Fig. 369.

Bent.

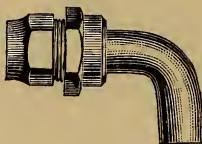


Fig. 370.

| Size, inches. ....                          | $\frac{1}{2}$ | $\frac{3}{4}$ | 1     |
|---------------------------------------------|---------------|---------------|-------|
| Price, Plain (Fig. 369), per doz.....       | 6.50          | 7.00          | 10.00 |
| Price, Ground Face (Fig. 369), per doz..... | 7.50          | 8.00          | 11.00 |
| Price, Plain (Fig. 370), per doz.....       | 7.50          | 8.00          | 11.00 |
| Price, Ground Face (Fig. 370), per doz..... | 8.50          | 9.00          | 12.50 |

SOLDERING NIPPLE.

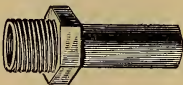


Fig. 371.

| Size, inches .....  | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{3}{4}$ | 1    | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2     | $2\frac{1}{2}$ | 3     |
|---------------------|---------------|---------------|---------------|---------------|------|----------------|----------------|-------|----------------|-------|
| Price, per doz..... | 1.75          | 2.25          | 2.50          | 3.00          | 5.00 | 7.50           | 10.00          | 14.00 | 20.00          | 28.00 |

SOLDERING UNION.



Fig. 372.

| Size, inches.....   | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{3}{4}$ | 1    | $1\frac{1}{4}$ | $1\frac{1}{2}$ |
|---------------------|---------------|---------------|---------------|---------------|------|----------------|----------------|
| Price, per doz..... | 2.25          | 2.75          | 3.25          | 4.00          | 6.00 | 8.50           | 12.00          |

END FERRULE, FOR IRON PIPE.

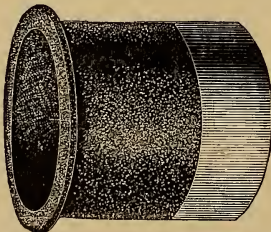


Fig. 373.

| Size, inches.....   | 2    | 3    | 4     |
|---------------------|------|------|-------|
| Price, per doz..... | 5.00 | 9.00 | 11.00 |

END FERRULE, FOR IRON PIPE.

With Trap Screw.

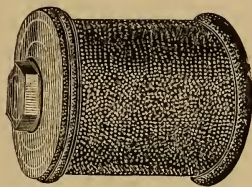


Fig. 374.

|                     |       |       |       |       |       |
|---------------------|-------|-------|-------|-------|-------|
| Size, inches.....   | 2     | 3     | 4     | 5     | 6     |
| Price, per doz..... | 10.00 | 20.00 | 30.00 | 54.00 | 72.00 |

BRASS CESSPOOL.

With Bell Trap.

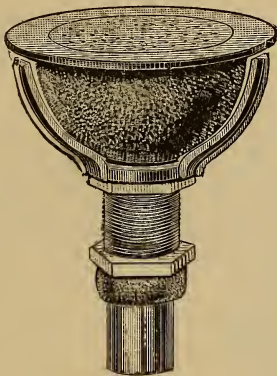


Fig. 375.

|                     |       |       |
|---------------------|-------|-------|
| Size, inches.....   | 5     | 6     |
| Price, per doz..... | 40.00 | 50.00 |

STREET WASHER SCREWS.

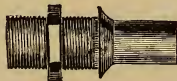


Fig. 376.

|                     |               |               |      |
|---------------------|---------------|---------------|------|
| Size, inches.....   | $\frac{1}{2}$ | $\frac{3}{4}$ | 1    |
| Price, per doz..... | 5.50          | 6.00          | 8.50 |

For Iron Pipe.



Fig. 377.

|                     |               |               |      |
|---------------------|---------------|---------------|------|
| Size, inches.....   | $\frac{1}{2}$ | $\frac{3}{4}$ | 1    |
| Price, per doz..... | 6.00          | 7.00          | 9.00 |



HYDRANT NOZZLE.

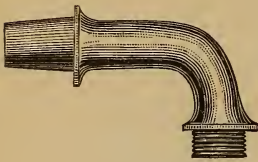


Fig. 378.

HYDRANT NOZZLE FOR IRON PIPE.

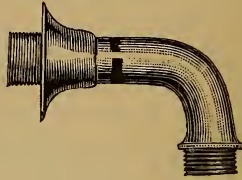


Fig. 379.

|                               |      |      |       |
|-------------------------------|------|------|-------|
| Size, inches .....            | 1/2  | 3/4  | 1     |
| Price, Fig. 378, per doz..... | 7.00 | 8.50 | 10.00 |
| Price, Fig. 379, per doz..... | 8.00 | 9.50 | 11.00 |

HYDRANT HANDLE AND GUIDE.



Fig. 380.

|                               |      |
|-------------------------------|------|
| Price, Straight, per doz..... | 7.00 |
|-------------------------------|------|

HYDRANT HANDLES.

Triangular Guide.



Fig. 381.

For Compression Cock.



Fig. 382.

|                                              |      |
|----------------------------------------------|------|
| Price, Fig. 381, per doz.....                | 8.00 |
| Price, Fig. 382, per doz.....                | 5.00 |
| Price, Fig. 382, Malleable Iron, per lb..... | .15  |

STREET WASHER CHECK.

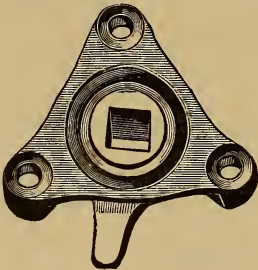


Fig. 383.

STREET WASHER KEY.

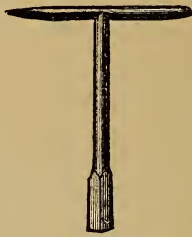


Fig. 384.

|                                          |      |                                    |     |
|------------------------------------------|------|------------------------------------|-----|
| Price, Brass, per doz.....               | 3.00 | Price, Malleable Iron, per lb..... | .15 |
| Price, for Iron Street Washer, each..... | .25  |                                    |     |

HYDRANT CLAMP.

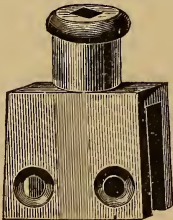


Fig. 385.

HYDRANT SOCKET.



Fig. 386.

|                                                 |      |                                    |      |
|-------------------------------------------------|------|------------------------------------|------|
| Price, for 1/2 and 5/8 inch Cocks, per doz..... | 2.50 | Price, Brass, per doz.....         | 2.00 |
| Price, for 3/4 and 1 inch Cocks, per doz.....   | 3.50 | Price, Malleable Iron, per lb..... | .15  |
| Price, Malleable Iron, per lb.....              | .15  |                                    |      |

POWELL'S PATENT STAR PLUGS.

With Rubber Stoppers.

BASIN PLUG, COMMON OVERFLOW.

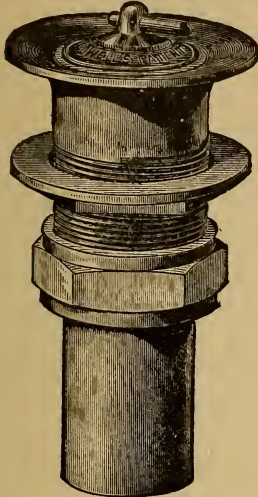


Fig. 387.

|                              |      |       |
|------------------------------|------|-------|
| Size, inches. ....           | 1    | 1¼    |
| Price, Brass, per doz. ....  | 5.50 | 9.50  |
| Price, Plated, per doz. .... | 7.00 | 12.00 |

SINK OR BATH PLUG.

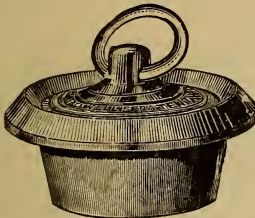


Fig. 389.

|                           |      |      |      |      |
|---------------------------|------|------|------|------|
| Size, inches. ....        | 1    | 1¼   | 1½   | 2    |
| Price, Brass, per doz. .  | 3.50 | 4.25 | 5.50 | 7.00 |
| Price, Plated, per doz. . | 4.50 | 5.50 | 7.00 | 9.00 |

BASIN PLUG, PATENT OVERFLOW.

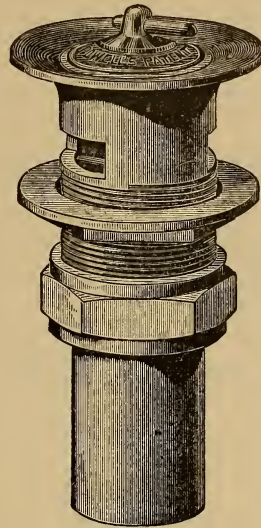


Fig. 388.

|                                 |      |       |
|---------------------------------|------|-------|
| Size, inches. ....              | 1    | 1¼    |
| Price, Brass, per doz. ....     | 7.00 | 11.00 |
| Price, Plated, per doz. . . . . | 8.50 | 13.00 |

WASH TRAY PLUG.

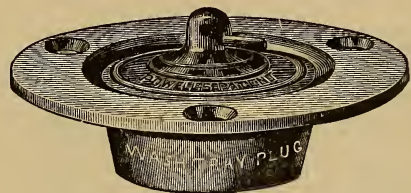


Fig. 390.

|                           |      |      |      |       |
|---------------------------|------|------|------|-------|
| Size, inches. ....        | 1    | 1¼   | 1½   | 2     |
| Price, Brass, per doz. .  | 4.20 | 5.00 | 7.00 | 12.00 |
| Price, Plated, per doz. . | 5.50 | 6.50 | 8.75 | 15.00 |

POWELL'S PATENT STAR STOPPERS.

Rubber.

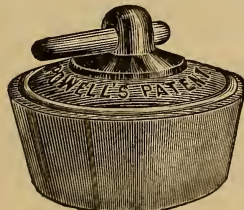


Fig. 391.

|                                                                                |      |      |      |
|--------------------------------------------------------------------------------|------|------|------|
| For Wash Bowls, per doz. ....                                                  | 2.50 |      |      |
| Size, inches. ....                                                             | 1¼   | 1½   | 2    |
| Price, for Wash Trays and Bath Tubs, with Brass Tips and Rings, per doz. ....  | 3.00 | 3.25 | 4.00 |
| Price, for Wash Trays and Bath Tubs, with Plated Tips and Rings, per doz. .... | 3.30 | 3.75 | 5.50 |

BASIN PLUG.  
Common Overflow.



Fig. 392.

|                                     |       |
|-------------------------------------|-------|
| Price, Finished, per doz. ....      | 8.00  |
| Price, Nickel Plated, per doz. .... | 8.50  |
| Price, Silver Plated, per doz. .... | 10.00 |

BASIN PLUG.  
Patent Overflow.

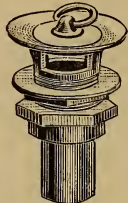


Fig. 393.

|                                     |       |
|-------------------------------------|-------|
| Price, Finished, per doz. ....      | 9.00  |
| Price, Nickel Plated, per doz. .... | 9.50  |
| Price, Silver Plated, per doz. .... | 11.00 |

BASIN GRATE.



Fig. 394.

|                                     |       |
|-------------------------------------|-------|
| Price, Finished, per doz. ....      | 12.00 |
| Price, Nickel Plated, per doz. .... | 13.00 |
| Price, Silver Plated, per doz. .... | 15.00 |

SOAPSTONE OR WOOD SINK PLUG.

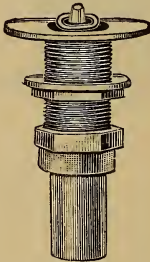


Fig. 395.

|                             |       |       |       |       |
|-----------------------------|-------|-------|-------|-------|
| Size, inches. ....          | 1     | 1¼    | 1½    | 2     |
| Price, Finished ... per doz | 15.00 | 16.00 | 26.00 | 40.00 |
| Price, Nickel Plated “      | 17.00 | 19.00 | 29.00 | 44.00 |
| Price, Silver Plated “      | 21.00 | 23.00 | 33.00 | 48.00 |

SINK OR BATH PLUG.



Fig. 396.

|                                     |      |      |      |      |      |       |       |       |       |
|-------------------------------------|------|------|------|------|------|-------|-------|-------|-------|
| Size, inches ....                   | 1    | 1¼   | 1½   | 1¾   | 2    | 2¼    | 2½    | 3½    | 4     |
| Price, Finished, per doz. ....      | 2.50 | 3.00 | 4.00 | 5.50 | 7.00 | 10.00 | 15.00 | 18.00 | 36.00 |
| Price, Nickel Plated, per doz. .... | 3.00 | 3.50 | 4.50 | 6.50 | 8.00 | 12.00 | 17.00 | 21.00 | 40.00 |

WASH TRAY PLUG.



Fig. 397.

|                                |      |      |      |      |       |       |       |       |
|--------------------------------|------|------|------|------|-------|-------|-------|-------|
| Size, inches. ....             | 1    | 1¼   | 1½   | 1¾   | 2     | 2½    | 3     | 4     |
| Price, Finished, per doz. .... | 3.75 | 6.00 | 7.00 | 9.00 | 10.00 | 17.00 | 22.00 | 44.00 |



## TRAP SCREW.



Fig. 398.

|                               |               |      |                |                |      |                |       |                |       |
|-------------------------------|---------------|------|----------------|----------------|------|----------------|-------|----------------|-------|
| Size, inches .....            | $\frac{3}{4}$ | 1    | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2    | $2\frac{1}{2}$ | 3     | $3\frac{1}{2}$ | 4     |
| Price, Finished, per doz..... | 2.50          | 2.75 | 3.50           | 4.50           | 8.00 | 12.00          | 18.00 | 26.00          | 30.00 |

## STRAINER.

Fancy.



Fig. 399.

|                               |                |                |      |                |      |                |      |      |       |
|-------------------------------|----------------|----------------|------|----------------|------|----------------|------|------|-------|
| Size, inches .....            | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2    | $2\frac{1}{2}$ | 3    | $3\frac{1}{2}$ | 4    | 5    | 6     |
| Price, Finished, per doz..... | 1.20           | 1.45           | 1.80 | 2.40           | 3.00 | 3.60           | 4.80 | 9.00 | 12.00 |

## WEAVER'S BASIN AND BATH WASTE VALVES.

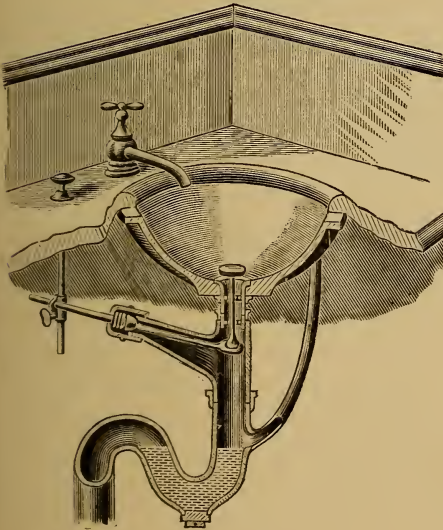


Fig. 400.

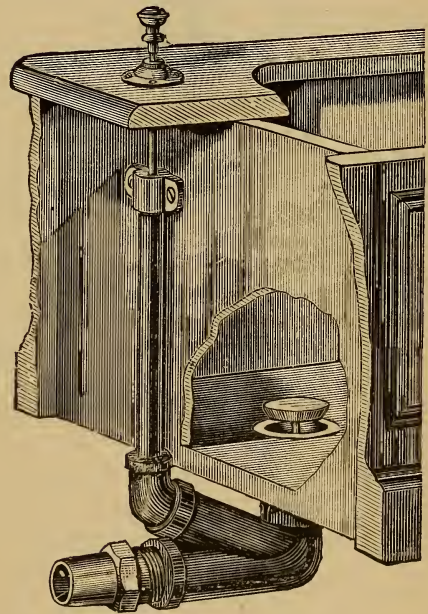


Fig. 401.

|                                    |      |
|------------------------------------|------|
| Price, each Basin Waste C. O.....  | 4.50 |
| Price, each Basin Waste P. O. .... | 4.50 |
| Price, each Bath Waste.....        | 5.50 |



Foley's Waste Valve, Flange & Handle.

VACUUM VALVE.



Fig. 402.

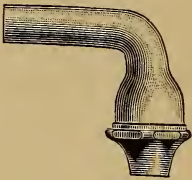


Fig. 403.

|                                             |      |
|---------------------------------------------|------|
| Price, Basin Waste, Nickel Plated, each ... | 6.67 |
| Price, Basin Waste, Silver Plated, each.... | 8.00 |
| Price, Bath Waste, Nickel Plated, each....  | 8.00 |
| Price, Bath Waste, Silver Plated, each..... | 9.00 |

|                     |       |
|---------------------|-------|
| Price, per doz..... | 12.00 |
|---------------------|-------|

CLOSET VALVES.



Fig. 404.

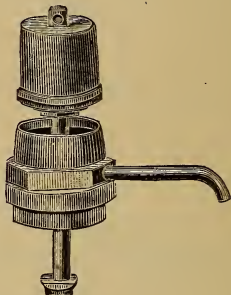


Fig. 405. New Pattern with Air Tube.

|                     |       |
|---------------------|-------|
| Price, per doz..... | 12.00 |
|---------------------|-------|

|                     |       |
|---------------------|-------|
| Price, per doz..... | 26.00 |
|---------------------|-------|

BOILER OR WATER BACK SAFETY VALVE.



Fig. 406.

|                  |      |
|------------------|------|
| Price, each..... | 2.50 |
|------------------|------|

Will prevent Water Back from bursting. Must be placed in pipe leading to boiler not more than three inches from the water back.

## CHAIN STAYS.

For Wood.



Fig. 407.



Fig. 408.

With Square Base to fit  
Basin Cock Hole.

Fig. 409.

Price, Finished, per doz... 2.00  
 Price, Nickel Pl'd, per doz. 2.50  
 Price, Silver Pl'd, per doz. 3.00

Price, Finished, per doz... 3.00  
 Price, Nickel Pl'd, per doz. 3.75  
 Price, Silver Pl'd, per doz. 4.50

Price, Finished, per doz... 3.50  
 Price, Nickel Pl'd, per doz. 4.25  
 Price, Silver Pl'd, per doz. 5.00

With Ring Cup.



Fig. 410.



Fig. 411.



Fig. 412.

Price, Finished, per doz... 5.50  
 Price, Nickel Pl'd, per doz. 6.50  
 Price, Silver Pl'd, per doz. 7.50

Price, Finished, per doz.. 15.00  
 Price, Nickel Pl'd, per doz 17.00  
 Price, Silver Pl'd, per doz 19.00

Price, Finished, per doz.. 8.00  
 Price, Nickel Pl'd, per doz 9.00  
 Price, Silver Pl'd, per doz 11.00

With Ring Cup.



Fig. 413.

Soap Cup.

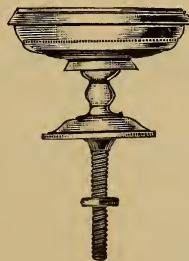


Fig. 414.

To Cover Basin Cock Hole.



Fig. 415.

Price, Finished, per doz.. 18.00  
 Price, Nickel Pl'd, per doz 20.00  
 Price, Silver Pl'd, per doz 22.00

Price, Finished, per doz.. 30.00  
 Price, Nickel Pl'd, per doz 32.00  
 Price, Silver Pl'd, per doz 34.00

Price, Finished, per doz... 3.50  
 Price, Nickel Plated, doz.. 4.50

BASIN CLAMPS.

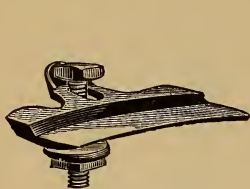


Fig. 416.

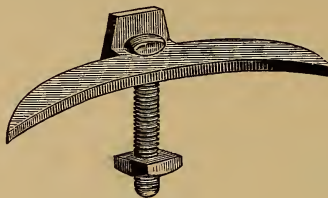


Fig. 417.

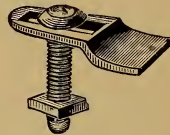


Fig. 418.

|                     |      |      |      |
|---------------------|------|------|------|
| Figures.....        | 416  | 417  | 418  |
| Price, per doz..... | 2.00 | 1.50 | 1.25 |

Plated Screws for Slabs.



Fig. 419.

Name Plates.



Fig. 420.

|                                     |      |                |                        |
|-------------------------------------|------|----------------|------------------------|
| Price, Silver Plated, per doz ..... | 1.25 | Made to order. | Prices on application. |
|-------------------------------------|------|----------------|------------------------|

TACK MOULDS.

Plain Pattern.

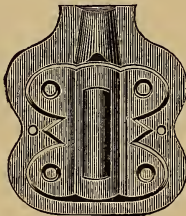


Fig. 421.

Star Pattern.

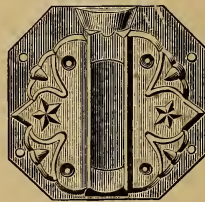


Fig. 422.

|                          |      |                          |      |
|--------------------------|------|--------------------------|------|
| Price, Single, each..... | 2.50 | Price, Single, each..... | 3.00 |
| Price, Double, each..... | 3.50 | Price, Double, each..... | 4.00 |

Closet Crank, Upright.

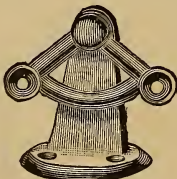


Fig. 423.

Closet Crank, Horizontal.



Fig. 424.

|                     |      |                     |      |
|---------------------|------|---------------------|------|
| Price, per doz..... | 3.00 | Price, per doz..... | 3.00 |
|---------------------|------|---------------------|------|

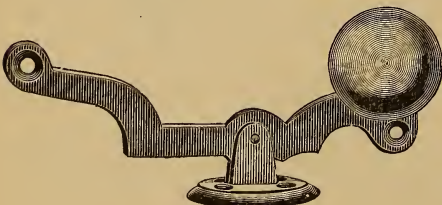


Fig. 425.














BALL LEVER.

For Closet.

|                     |      |
|---------------------|------|
| Price, per doz..... | 6.00 |
|---------------------|------|



CHAIN.

| SAFETY                                                                             | Price per Package. |         | Wire Gauge. |
|------------------------------------------------------------------------------------|--------------------|---------|-------------|
|                                                                                    | Brass.             | Plated. |             |
|    | 2.25               | 3.00    | No. 00.     |
|    | 2.50               | 3.25    | No. 0.      |
|    | 3.12               | 4.08    | No. 1.      |
|    | 4.68               | 5.75    | No. 2.      |
|    | 6.36               | 8.00    | No. 3.      |
| Fig. 426.                                                                          |                    |         |             |
| SINGLE.                                                                            | Price per Package. |         | Wire Gauge. |
|                                                                                    | Brass.             | Plated. |             |
|    | .55                | 1.15    | No. 22.     |
|    | .70                | 1.35    | No. 20.     |
|    | 1.00               | 1.60    | No. 18.     |
|    | 1.10               | 1.80    | No. 17.     |
|   | 1.25               | 2.10    | No. 16.     |
|  | 1.40               | 2.25    | No. 15.     |
|  | 1.70               | 2.85    | No. 14.     |
|  | 2.50               | 3.75    | No. 12.     |
| Fig. 427.                                                                          |                    |         |             |

BATH, BASIN AND WASH TRAY CHAINS AND SNAPS.

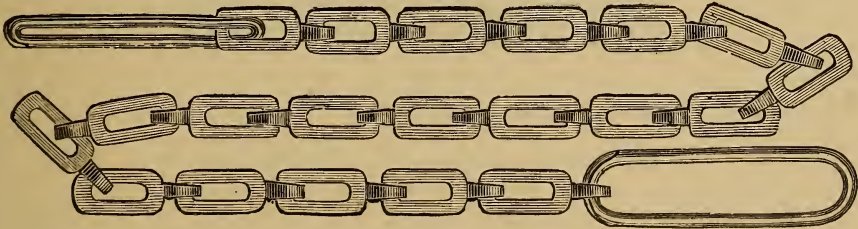


Fig. 428.

|                                              | Brass. | Plated. |
|----------------------------------------------|--------|---------|
| Price, for Basins, per doz.....              | 1.00   | 1.35    |
| Price, for Bath and Wash Trays, per doz..... | 1.35   | 2.00    |

Basin Chains 16 inches long. Bath and Tray Chains 27 inches long.



CAST IRON SOIL PIPE AND FITTINGS.

SINGLE HUB PIPE.



Fig. 429.

|                                                  |      |
|--------------------------------------------------|------|
| Price, 2 inch, 5 feet long, per foot.....        | .24  |
| “ 3 “ “ “ .....                                  | .30  |
| “ 4 “ “ “ .....                                  | .36  |
| “ 5 “ “ “ .....                                  | .50  |
| “ 6 “ “ “ .....                                  | .60  |
| “ 8 “ “ “ .....                                  | 1.25 |
| “ 10 “ “ “ .....                                 | 2.00 |
| “ 12 “ “ “ .....                                 | 3.00 |
| “ 2 inch, Extra Heavy, 5 feet long, per foot.... | .35  |
| “ 3 “ “ “ “ “ .....                              | .55  |
| “ 4 “ “ “ “ “ .....                              | .75  |
| “ 5 “ “ “ “ “ .....                              | 1.00 |
| “ 6 “ “ “ “ “ .....                              | 1.20 |
| “ 8 “ “ “ “ “ .....                              | 2.25 |
| “ 10 “ “ “ “ “ .....                             | 3.00 |
| “ 12 “ “ “ “ “ .....                             | 4.00 |

DOUBLE HUB PIPE.



Fig. 430.

|                                       | Standard. | Ex. Heavy. |
|---------------------------------------|-----------|------------|
| Price, 2 inch, 5 feet long, each..... | 1.50      | 2.05       |
| “ 3 “ “ “ .....                       | 1.80      | 3.05       |
| “ 4 “ “ “ .....                       | 2.10      | 4.05       |
| “ 5 “ “ “ .....                       | 2.80      | 5.30       |
| “ 6 “ “ “ .....                       | 3.30      | 6.30       |

PIPE FITTINGS.

QUARTER BEND.



Fig. 431.

|                     | Standard. | Ex. Heavy. |
|---------------------|-----------|------------|
| Price, 2 inch, each | .40       | .50        |
| " 3 " "             | .55       | .70        |
| " 4 " "             | .65       | 1.10       |
| " 5 " "             | 1.00      | 1.35       |
| " 6 " "             | 1.20      | 1.75       |
| " 8 " "             | 3.00      | 4.00       |
| " 10 " "            | 4.00      | 5.00       |

QUARTER BEND.

Double Hub.



Fig. 432.

|                     | Standard. | Ex. Heavy. |
|---------------------|-----------|------------|
| Price, 2 inch, each | .70       | .80        |
| " 3 " "             | .85       | 1.00       |
| " 4 " "             | .95       | 1.40       |
| " 5 " "             | 1.30      | 1.65       |
| " 6 " "             | 1.50      | 2.05       |

QUARTER BEND.

With Two-inch Outlet on Side.



Fig. 433.

|                                         | Standard. | Ex. Heavy. |
|-----------------------------------------|-----------|------------|
| Price, 2 inch, with 2 inch Outlet, each | .70       | .80        |
| " 3 " " 2 " " "                         | .85       | 1.00       |
| " 4 " " 2 " " "                         | .95       | 1.40       |
| " 4 " " 3 " " "                         | 1.05      | 1.50       |
| " 5 " " 2 " " "                         | 1.30      | 1.65       |
| " 5 " " 3 " " "                         | 1.40      | 1.75       |
| " 6 " " 2 " " "                         | 1.50      | 2.05       |
| " 6 " " 3 " " "                         | 1.60      | 2.15       |
| " 6 " " 4 " " "                         | 1.70      | 2.25       |
| " 8 " " 4 " " "                         | 3.50      | 4.50       |
| " 10 " " 4 " " "                        | 4.50      | 5.50       |

QUARTER BEND.

With Heel Outlet.



Fig. 434.

|                                         | Standard. | Ex. Heavy. |
|-----------------------------------------|-----------|------------|
| Price, 2 inch, with 2 inch Outlet, each | .70       | .80        |
| " 3 " " 2 " " "                         | .85       | 1.00       |
| " 4 " " 2 " " "                         | .95       | 1.40       |
| " 4 " " 3 " " "                         | 1.05      | 1.50       |
| " 5 " " 2 " " "                         | 1.30      | 1.65       |
| " 5 " " 3 " " "                         | 1.40      | 1.75       |
| " 6 " " 2 " " "                         | 1.50      | 2.05       |
| " 6 " " 3 " " "                         | 1.60      | 2.15       |
| " 6 " " 4 " " "                         | 1.70      | 2.25       |
| " 8 " " 4 " " "                         | 3.50      | 4.50       |
| " 10 " " 4 " " "                        | 4.50      | 5.50       |



T BRANCH, WITH SIDE OUTLET.



Fig. 441.

|                                                   | Standard. | Ex. Heavy. |
|---------------------------------------------------|-----------|------------|
| Price, 4 x 4 inches, with 2 inch outlet each..... |           |            |
| “ 4 x 3 “ “ 2 “ “ “ .....                         | 1.25      | 1.80       |
| “ 4 x 2 “ “ 2 “ “ “ .....                         |           |            |
| “ 5 x 5 “ “ 2 “ “ “ .....                         |           |            |
| “ 5 x 4 “ “ 2 “ “ “ .....                         |           |            |
| “ 5 x 3 “ “ 2 “ “ “ .....                         | 1.80      | 2.10       |
| “ 5 x 2 “ “ 2 “ “ “ .....                         |           |            |
| “ 6 x 6 “ “ 2 “ “ “ .....                         |           |            |
| “ 6 x 5 “ “ 2 “ “ “ .....                         |           |            |
| “ 6 x 4 “ “ 2 “ “ “ .....                         | 2.00      | 2.50       |
| “ 6 x 3 “ “ 2 “ “ “ .....                         |           |            |
| “ 6 x 2 “ “ 2 “ “ “ .....                         |           |            |

LONG T BRANCH.

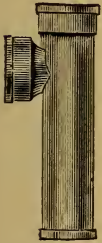


Fig. 442.

|                                                | Standard. | Ex. Heavy. |
|------------------------------------------------|-----------|------------|
| Price, 4 x 4, 24 inch in the clear, each ..... | 2.00      | 3.00       |
| “ 4 x 4, 30 “ “ “ “ .....                      | 2.50      | 3.75       |
| “ 4 x 4, 36 “ “ “ “ .....                      | 3.00      | 4.25       |
| “ 5 x 4, 24 “ “ “ “ .....                      | 2.75      | 4.00       |
| “ 5 x 4, 30 “ “ “ “ .....                      | 3.50      | 5.00       |
| “ 5 x 4, 36 “ “ “ “ .....                      | 4.25      | 6.25       |
| “ 6 x 4, 24 “ “ “ “ .....                      | 3.50      | 5.00       |
| “ 6 x 4, 30 “ “ “ “ .....                      | 4.50      | 6.50       |
| “ 6 x 4, 36 “ “ “ “ .....                      | 5.50      | 8.00       |

VENTILATING BRANCH.



Fig. 443.

|                         | Standard. | Ex. Heavy. |
|-------------------------|-----------|------------|
| Price, 2 x 2, each..... | .80       | 1.25       |
| “ 3 x 2, “ .....        | 1.25      | 1.75       |
| “ 4 x 2, “ .....        | 1.50      | 2.00       |
| “ 5 x 2, “ .....        | 2.00      | 2.75       |
| “ 5 x 4, “ .....        |           |            |
| “ 6 x 4, “ .....        |           |            |
| “ 8 x 4, “ .....        | 3.00      | 4.00       |
| “ 8 x 5, “ .....        | 6.00      | 8.50       |

CROSS HEAD BRANCH.




Fig. 444.

|             | Standard. | Ex. Heavy. |               | Standard. | Ex. Heavy. |
|-------------|-----------|------------|---------------|-----------|------------|
| 2 x 2 ..... | .80       | 1.00       | 6 x 6 }       | 2.50      | 3.25       |
| 3 x 3 }     | 1.10      | 1.40       | 6 x 5 }       |           |            |
| 3 x 2 }     |           |            | 6 x 4 }       |           |            |
| 4 x 4 }     |           |            | 6 x 3 }       |           |            |
| 4 x 3 }     | 1.25      | 1.75       | 6 x 2 }       |           |            |
| 4 x 2 }     |           |            | 8 x 8 }       | 5.00      | 7.00       |
| 5 x 5 }     | 1.60      | 2.00       | to }          |           |            |
| 5 x 4 }     |           |            | 8 x 2 }       |           |            |
| 5 x 3 }     |           |            | 10 x 10 ..... | 8.00      | 11.00      |
| 5 x 2 }     |           |            |               |           |            |

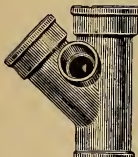


## Y BRANCH.

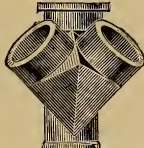
|                                                                                                |             | Standard. | Ex. Heavy. |           |       | Standard. | Ex. Heavy. |
|------------------------------------------------------------------------------------------------|-------------|-----------|------------|-----------|-------|-----------|------------|
| <br>Fig. 445. | 2 x 2 ..... | 0.60      | 0.80       | 6 x 3 }   | ..... | 2.00      | 3.25       |
|                                                                                                | 3 x 3 }     | .80       | 1.25       | 6 x 2 }   |       |           |            |
|                                                                                                | 3 x 2 ..... |           |            | 8 x 8 }   |       |           |            |
|                                                                                                | 4 x 4 }     | 1.20      | 1.60       | to        | ..... | 5.00      | 7.50       |
|                                                                                                | 4 x 3 }     |           |            | 8 x 2 }   |       |           |            |
|                                                                                                | 4 x 2 ..... |           |            | 10 x 10 } |       |           |            |
|                                                                                                | 5 x 5 }     | 1.60      | 2.25       | 10 x 8 }  | ..... | 7.00      | 11.00      |
|                                                                                                | 5 x 4 }     |           |            | 10 x 6 }  |       |           |            |
|                                                                                                | 5 x 3 ..... |           |            | 10 x 5 }  |       |           |            |
|                                                                                                | 5 x 2 }     |           |            | 10 x 4 }  |       |           |            |
|                                                                                                | 6 x 6 }     |           |            | 10 x 3 }  |       |           |            |
|                                                                                                | 6 x 5 ..... | 2.00      | 3.25       | 10 x 2 }  |       |           |            |
|                                                                                                | 6 x 4 }     |           |            |           |       |           |            |

## Y BRANCH.


With Side Outlet.

|                                                                                                |                                  | Standard. | Ex. Heavy. |
|------------------------------------------------------------------------------------------------|----------------------------------|-----------|------------|
| <br>Fig. 446. | 4 x 4, with 2 inch side outlet } | 1.80      | 2.20       |
|                                                                                                | 4 x 3, " 2 " " }                 |           |            |
|                                                                                                | 4 x 2, " 2 " " }                 |           |            |
|                                                                                                | 5 x 5, " 2 " " }                 |           |            |
|                                                                                                | 5 x 4, " 2 " " }                 | 2.20      | 2.85       |
|                                                                                                | 5 x 3, " 2 " " }                 |           |            |
|                                                                                                | 5 x 2, " 2 " " }                 |           |            |
|                                                                                                | 6 x 6, " 2 " " }                 |           |            |
|                                                                                                | 6 x 5, " 2 " " }                 | 2.60      | 3.85       |
|                                                                                                | 6 x 4, " 2 " " }                 |           |            |
|                                                                                                | 6 x 3, " 2 " " }                 |           |            |
|                                                                                                | 6 x 2, " 2 " " }                 |           |            |

## DOUBLE ANGLE Y.

|                                                                                                  | Standard.        | Ex. Heavy. |
|--------------------------------------------------------------------------------------------------|------------------|------------|
| <br>Fig. 447. | 4 x 4, each..... | 3.50       |
|                                                                                                  | 5 x 4, each..... | 4.50       |
|                                                                                                  | 6 x 4, each..... | 5.75       |
|                                                                                                  |                  | 7.25       |

## DOUBLE Y BRANCH.

|                                                                                                  | Standard.   | Ex. Heavy. |      | Standard. | Ex. Heavy. |
|--------------------------------------------------------------------------------------------------|-------------|------------|------|-----------|------------|
| <br>Fig. 448. | 2 x 2 ..... | 1.00       | 1.25 | 6 x 4 }   | 3.00       |
|                                                                                                  | 3 x 3 }     | 1.25       | 1.60 | 6 x 3 }   |            |
|                                                                                                  | 3 x 2 ..... |            |      | 6 x 2 }   |            |
|                                                                                                  | 4 x 4 }     | 1.65       | 1.90 | 8 x 8 }   | 6.00       |
|                                                                                                  | 4 x 3 }     |            |      | 8 x 6 }   |            |
|                                                                                                  | 4 x 2 ..... |            |      | 8 x 5 }   |            |
|                                                                                                  | 5 x 5 }     | 2.25       | 3.00 | 8 x 4 }   |            |
|                                                                                                  | 5 x 4 }     |            |      | 8 x 3 }   |            |
|                                                                                                  | 5 x 3 ..... |            |      | 8 x 2 }   |            |
|                                                                                                  | 5 x 2 }     | 3.00       | 4.00 | 10 x 10 } | 9.00       |
|                                                                                                  | 6 x 6 }     |            |      | to        |            |
|                                                                                                  | 6 x 5 ..... |            |      | 10 x 2 }  | 14.00      |

## HALF Y BRANCH.



Fig. 449.

|       | Standard. | Ex. Heavy. |       | Standard. | Ex. Heavy. |
|-------|-----------|------------|-------|-----------|------------|
| 2 x 2 | .60       | .80        | 6 x 6 | 2.00      | 3.25       |
| 3 x 3 | .80       | 1.25       | 6 x 5 |           |            |
| 3 x 2 |           |            | 6 x 4 |           |            |
| 4 x 4 | 1.20      | 1.60       | 6 x 3 |           |            |
| 4 x 3 |           |            | 6 x 2 | 5.00      | 7.50       |
| 4 x 2 |           |            | 8 x 8 |           |            |
| 5 x 5 | 1.60      | 2.25       | 8 x 6 |           |            |
| 5 x 4 |           |            | 8 x 5 |           |            |
| 5 x 3 |           |            | 8 x 4 |           |            |
| 5 x 2 |           |            | 8 x 2 |           |            |

## DOUBLE HALF Y BRANCH.



Fig. 450.

|       | Standard. | Ex. Heavy. |       | Standard. | Ex. Heavy. |
|-------|-----------|------------|-------|-----------|------------|
| 2 x 2 | 1.00      | 1.25       | 6 x 6 | 3.00      | 4.00       |
| 3 x 3 | 1.25      | 1.60       | 6 x 5 |           |            |
| 3 x 2 |           |            | 6 x 4 |           |            |
| 4 x 4 | 1.65      | 1.90       | 6 x 3 |           |            |
| 4 x 3 |           |            | 6 x 2 | 6.00      | 9.00       |
| 4 x 2 |           |            | 8 x 8 |           |            |
| 5 x 5 | 2.25      | 3.00       | 8 x 6 |           |            |
| 5 x 4 |           |            | 8 x 5 |           |            |
| 5 x 3 |           |            | 8 x 4 |           |            |
| 5 x 2 |           |            | 8 x 2 |           |            |

## OFFSET.



Fig. 451.

|                                         | Standard. | Ex. Heavy. |
|-----------------------------------------|-----------|------------|
| Price, 2 inch to offset 4 inch, each .. | .50       | .90        |
| " 2 " " 6 " "                           | .60       | 1.00       |
| " 2 " " 8 " "                           | .70       | 1.10       |
| " 2 " " 10 " "                          | .80       | 1.20       |
| " 2 " " 12 " "                          | .85       | 1.25       |
| " 3 " " 4 " "                           | .75       | 1.10       |
| " 3 " " 6 " "                           | .80       | 1.20       |
| " 3 " " 8 " "                           | .90       | 1.35       |
| " 3 " " 12 " "                          | 1.00      | 1.40       |
| " 4 " " 4 " "                           | .85       | 1.25       |
| " 4 " " 6 " "                           | 1.00      | 1.40       |
| " 4 " " 8 " "                           | 1.15      | 1.50       |
| " 4 " " 10 " "                          | 1.25      | 1.60       |
| " 4 " " 12 " "                          | 1.40      | 1.80       |
| " 4 " " 14 " "                          | 1.65      | 2.00       |
| " 4 " " 16 " "                          | 1.80      | 2.25       |
| " 4 " " 20 " "                          | 2.25      | 3.00       |
| " 5 " " 4 " "                           | 1.40      | 1.80       |
| " 5 " " 6 " "                           | 1.60      | 2.00       |
| " 5 " " 8 " "                           | 1.80      | 2.25       |
| " 5 " " 12 " "                          | 2.00      | 2.50       |
| " 5 " " 16 " "                          | 2.40      | 3.00       |
| " 6 " " 4 " "                           | 2.00      | 2.50       |
| " 6 " " 6 " "                           | 2.25      | 3.00       |
| " 6 " " 8 " "                           | 2.40      | 3.25       |
| " 6 " " 12 " "                          | 2.75      | 3.50       |

OFFSET.

With 2 inch Outlet.



Fig. 452.

|                                            | Standard. | Ex. Heavy. |
|--------------------------------------------|-----------|------------|
| Price, 4 inch to offset 4 inch, each ..... | 1.15      | 1.55       |
| " 4 " " 6 " " .....                        | 1.30      | 1.70       |
| " 4 " " 8 " " .....                        | 1.45      | 1.80       |
| " 4 " " 10 " " .....                       | 1.55      | 1.90       |
| " 4 " " 12 " " .....                       | 1.70      | 2.10       |
| " 4 " " 14 " " .....                       | 1.95      | 2.30       |
| " 4 " " 16 " " .....                       | 2.10      | 2.55       |
| " 4 " " 20 " " .....                       | 2.55      | 3.30       |

SINGLE HUB.



Fig. 453.

|                          | Standard. | Ex. Heavy. |
|--------------------------|-----------|------------|
| Price, 2 inch, each..... | .25       | .35        |
| " 3 " " .....            | .35       | .40        |
| " 4 " " .....            | .40       | .50        |
| " 5 " " .....            | .60       | .75        |
| " 6 " " .....            | .75       | 1.00       |
| " 8 " " .....            | 1.40      | 3.00       |
| " 10 " " .....           | 2.50      | 4.00       |

DOUBLE HUB.



Fig. 454.

|                          | Standard. | Ex. Heavy. |
|--------------------------|-----------|------------|
| Price, 2 inch, each..... | .30       | .40        |
| " 3 " " .....            | .45       | .55        |
| " 4 " " .....            | .65       | .75        |
| " 5 " " .....            | .75       | .90        |
| " 6 " " .....            | .80       | 1.15       |
| " 8 " " .....            | 1.50      | 3.25       |
| " 10 " " .....           | 2.50      | 4.00       |

REDUCER.



Fig. 455.

|                                    | Standard. | Ex. Heavy. |
|------------------------------------|-----------|------------|
| Price, 4 inch to 2 inch, each..... | .50       | .60        |
| " 5 " " 3 " " } .....              | .70       | .80        |
| " 5 " " 4 " " } .....              |           |            |
| " 6 " " 2 " " } .....              | .80       | .90        |
| " 6 " " 3 " " } .....              |           |            |
| " 6 " " 4 " " } .....              |           |            |
| " 8 " " 3 " " } .....              |           |            |
| " 8 " " 4 " " } .....              |           |            |
| " 8 " " 5 " " } .....              | 1.60      | 2.20       |
| " 8 " " 6 " " } .....              |           |            |

THIMBLE.

To Connect Lead Pipe to Iron Soil Pipe.



Fig. 456.

|                          |     |
|--------------------------|-----|
| Price, 2 inch, each..... | .15 |
| " 3 " " .....            | .25 |
| " 4 " " .....            | .30 |

STRAIGHT SLEEVE.



Fig. 457.

|                          | Standard. | Ex. Heavy. |
|--------------------------|-----------|------------|
| Price, 2 inch, each..... | .30       | .40        |
| “ 3 “ “.....             | .45       | .55        |
| “ 4 “ “.....             | .65       | .75        |
| “ 5 “ “.....             | .75       | .90        |
| “ 6 “ “.....             | .80       | 1.15       |
| “ 8 “ “.....             | 1.50      | 3.25       |

PIPE PLUG.



Fig. 458.

|                          | Standard. | Ex. Heavy. |
|--------------------------|-----------|------------|
| Price, 2 inch, each..... | .15       | .25        |
| “ 3 “ “.....             | .25       | .35        |
| “ 4 “ “.....             | .30       | .40        |
| “ 5 “ “.....             | .35       | .50        |
| “ 6 “ “.....             | .50       | .65        |
| “ 8 “ “.....             | 1.20      | 1.50       |

VENTILATING CAPS.



Fig. 459.

|                            |      |
|----------------------------|------|
| Price, 2 inch, each.....   | .40  |
| “ 3 “ “.....               | .60  |
| “ 4 “ “ 8 inches long..... | .80  |
| “ 4 “ “ 18 “ “.....        | 1.00 |
| “ 5 “ “.....               | 1.10 |
| “ 6 “ “.....               | 1.50 |

PIPE REST.



Fig. 460.

|                          | Standard. | Ex. Heavy. |
|--------------------------|-----------|------------|
| Price, 2 inch, each..... | .30       | .40        |
| “ 3 “ “.....             | .40       | .55        |
| “ 4 “ “.....             | .50       | .65        |
| “ 5 “ “.....             | .60       | .80        |
| “ 6 “ “.....             | .70       | 1.00       |
| “ 8 “ “.....             | 1.10      | 1.75       |
| “ 10 “ “.....            | 1.75      | 2.50       |

PIPE HOOK.



Fig. 461.

|                          |     |
|--------------------------|-----|
| Price, 2 inch, each..... | .08 |
| “ 3 “ “.....             | .10 |
| “ 4 “ “.....             | .12 |
| “ 5 “ “.....             | .15 |
| “ 6 “ “.....             | .20 |
| “ 8 “ “.....             | .40 |

S TRAP.



Fig. 462.

|                          | Standard. | Ex. Heavy. |
|--------------------------|-----------|------------|
| Price, 2 inch, each..... | .80       | 1.25       |
| “ 3 “ “.....             | 1.25      | 1.75       |
| “ 4 “ “.....             | 1.50      | 2.50       |
| “ 5 “ “.....             | 3.00      | 4.00       |
| “ 6 “ “.....             | 3.75      | 5.00       |



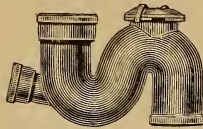


Fig. 463.

### S TRAP.

With Heel Outlet.

|                                     | Standard. | Ex. Heavy. |
|-------------------------------------|-----------|------------|
| Price, 4 inch, S Trap, each.....    | 2.00      | 3.00       |
| " 4 " $\frac{1}{2}$ S Trap, " ..... | 2.00      | 3.00       |
| " 4 " $\frac{3}{4}$ S Trap, " ..... | 2.00      | 3.00       |

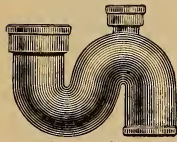


Fig. 464.

### S TRAP.

With Vent on Top.

|                                             | Standard. | Ex. Heavy. |
|---------------------------------------------|-----------|------------|
| Price, 2 inch, with 2 inch Vent, each ..... | 1.80      | 1.75       |
| " 3 " " 2 " " " .....                       | 1.75      | 2.25       |
| " 4 " " 2 " " " .....                       | 2.00      | 3.00       |
| " 5 " " 2 " " " .....                       | 3.50      | 4.50       |
| " 6 " " 2 " " " .....                       | 4.25      | 5.50       |



Fig. 465.

### THREE-QUARTER S TRAP.

|                          | Standard. | Ex. Heavy. |
|--------------------------|-----------|------------|
| Price, 2 inch, each..... | .80       | 1.25       |
| " 3 " " .....            | 1.25      | 1.75       |
| " 4 " " .....            | 1.50      | 2.50       |
| " 5 " " .....            | 3.00      | 4.00       |
| " 6 " " .....            | 3.75      | 5.00       |

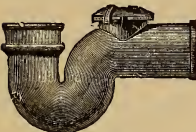


Fig. 466.

### HALF S TRAP.

|                          | Standard. | Ex. Heavy. |
|--------------------------|-----------|------------|
| Price, 2 inch, each..... | .80       | 1.25       |
| " 3 " " .....            | 1.25      | 1.75       |
| " 4 " " .....            | 1.50      | 2.50       |
| " 5 " " .....            | 3.00      | 4.00       |
| " 6 " " .....            | 3.75      | 5.00       |

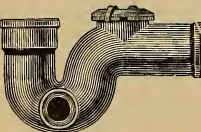


Fig. 467.

### HALF S TRAP.

With Side Outlet.

|                                               | Standard. | Ex. Heavy. |
|-----------------------------------------------|-----------|------------|
| Price, 4 inch $\frac{1}{2}$ S Trap, each..... | 2.00      | 3.00       |
| " 4 " $\frac{3}{4}$ S " " .....               | 2.00      | 3.00       |
| " 4 " S " " .....                             | 2.00      | 3.00       |



Fig. 468.

### HALF S TRAP.

Without Hand Hole.

|                          | Standard. | Ex. Heavy. |
|--------------------------|-----------|------------|
| Price, 4 inch, each..... | 1.50      | 2.50       |



Fig. 469.

### RUNNING TRAP.

|                          | Standard. | Ex. Heavy. |
|--------------------------|-----------|------------|
| Price, 2 inch, each..... | .80       | 1.25       |
| " 3 " " .....            | 1.25      | 1.75       |
| " 4 " " .....            | 1.50      | 2.50       |
| " 5 " " .....            | 3.00      | 4.00       |
| " 6 " " .....            | 3.75      | 5.00       |

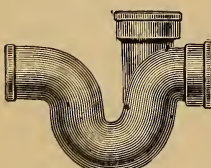


Fig. 470.

### RUNNING TRAPS.

With Hub for Vent.

|                                      | Standard. | Ex. Heavy. |
|--------------------------------------|-----------|------------|
| Price, 4 inch with 4 inch vent ..... | 2.00      | 3.00       |
| " 5 " " 4 " " .....                  | 3.50      | 4.50       |
| " 6 " " 4 " " .....                  | 4.25      | 5.50       |
| " 8 " " 6 " " .....                  | 10.00     | 13.00      |
| " 10 " " 6 " " .....                 |           | 21.00      |

# GREENHOUSE PIPE FITTINGS.

## RETURN BEND.



Fig. 471.

|                          |      |
|--------------------------|------|
| Price, 2 inch, each..... | .65  |
| “ 3 “ “.....             | .85  |
| “ 4 “ “.....             | 1.25 |
| “ 5 “ “.....             | 2.00 |
| “ 6 “ “.....             | 3.00 |



Fig. 472.

## RETURN BEND.

Double Hub.

|                          |      |
|--------------------------|------|
| Price, 4 inch, each..... | 1.25 |
|--------------------------|------|

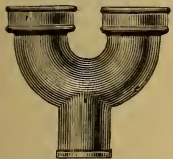


Fig. 473.

## RETURN BEND.

Spigot Outlet.

|                          |      |
|--------------------------|------|
| Price, 4 inch, each..... | 1.50 |
|--------------------------|------|

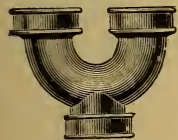


Fig. 474.

## RETURN BEND.

Hub Outlet.

|                          |      |
|--------------------------|------|
| Price, 4 inch, each..... | 1.50 |
|--------------------------|------|

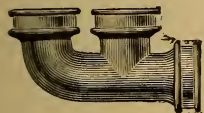


Fig. 475.

## DOUBLE ELBOW.

|                          |      |
|--------------------------|------|
| Price, 4 inch, each..... | 1.75 |
|--------------------------|------|



Fig. 476.

## TRIPLE ELBOW.

|                          |      |
|--------------------------|------|
| Price, 4 inch, each..... | 2.50 |
|--------------------------|------|



Fig. 477.

## THREE-WAY ELBOW.

|                          |      |
|--------------------------|------|
| Price, 4 inch, each..... | 2.50 |
|--------------------------|------|

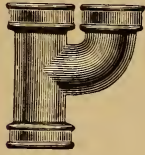


Fig. 478.

**H BRANCH.**

Price, 4 inch, each..... 1.50



Fig. 479.

**PIPE CHAIRS.**

Price, 4 inch, for 2 pipes, per set..... .25

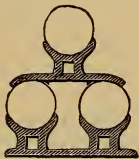


Fig. 480.

**PIPE CHAIRS.**

Price, 4 inch, for 3 pipes, per set..... .50

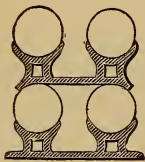


Fig. 481.

**PIPE CHAIRS.**

Price, 4 inch, for 4 pipes, each, per set ..... .75

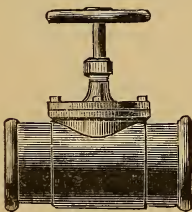


Fig. 482.

**GREENHOUSE VALVE.**

Price, 4 inch, each, net..... 6.00

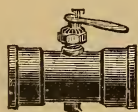


Fig. 483.

**GREENHOUSE BUTTERFLY VALVE.**

Price, 4 inch, each, net ... 3.50

## WROUGHT STEEL SINK.



Fig. 484.

### PAINTED.

|                        |      |
|------------------------|------|
| 16 x 24 x 6, each..... | 1.80 |
| 18 x 30 x 6, " .....   | 2.50 |
| 18 x 36 x 6, " .....   | 3.00 |
| 20 x 30 x 6, " .....   | 3.00 |
| 20 x 36 x 6, " .....   | 3.70 |
| 20 x 40 x 6, " .....   | 4.00 |

### GALVANIZED.

|                        |      |
|------------------------|------|
| 16 x 24 x 6, each..... | 4.00 |
| 18 x 30 x 6, " .....   | 5.10 |
| 18 x 36 x 6, " .....   | 6.50 |
| 20 x 30 x 6, " .....   | 6.25 |
| 20 x 36 x 6, " .....   | 7.75 |
| 20 x 40 x 6, " .....   | 8.50 |

### GRAY ENAMELED.

|                        |       |
|------------------------|-------|
| 16 x 24 x 6, each..... | 6.50  |
| 18 x 30 x 6, " .....   | 8.50  |
| 18 x 36 x 6, " .....   | 9.50  |
| 20 x 30 x 6, " .....   | 9.00  |
| 20 x 36 x 6, " .....   | 10.50 |
| 20 x 40 x 6, " .....   | 11.50 |

### WHITE ENAMELED.

|                       |       |
|-----------------------|-------|
| 16 x 24 x 6, each.... | 6.50  |
| 18 x 30 x 6, " .....  | 8.50  |
| 18 x 36 x 6, " .....  | 9.50  |
| 20 x 30 x 6, " .....  | 9.00  |
| 20 x 36 x 6, " .....  | 10.50 |
| 20 x 40 x 6, " .....  | 11.50 |

## OVAL STEEL SINKS.

Size, Inside of Rim, 10 x 20 Inches.

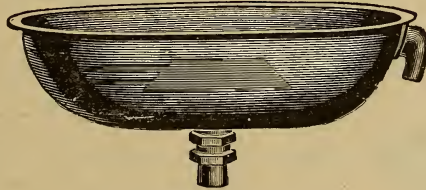


Fig. 485.

|                                  |      |
|----------------------------------|------|
| Price, Painted, each.....        | 2.50 |
| Price, Galvanized, each.....     | 4.00 |
| Price, Gray Enameled, each.....  | 6.00 |
| Price, White Enameled, each..... | 6.00 |

With  
Overflow.

These Sinks are made from one plate of steel and are superior to cast iron sinks in every particular, being lighter, stronger, and more durable.

It is well known that cast-iron sinks break easily in shipping, storing, placing in position for use, and from various other causes, adding largely to average cost to plumbers and dealers, and annoyance and loss to users.

These sinks, being of wrought steel, will not break from heat, cold, or any cause whatever. Steel being less porous than cast-iron, they are comparatively odorless, and their greater elasticity avoids the breakage of dishes.

The bowl and projecting thimble are stamped in one piece from the same plate, and we are enabled to attach strainer and pipe more satisfactorily than is possible with cast-iron sinks.

Our new coupling, for either wrought iron or lead pipe, is pronounced by all plumbers the best thing on the market.

We furnish these Sinks at prices, freedom from breakage considered, less than for sinks made from cast-iron.



CAST IRON SQUARE SINKS.

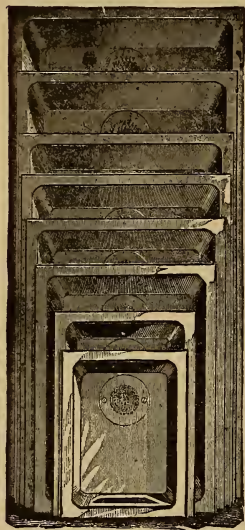


Fig. 486.

| Sizes, Inches. | Depth, Inches. | Plain. | Galvanized. | Gray Enameled. | White Enameled. |
|----------------|----------------|--------|-------------|----------------|-----------------|
| 13 x 19        | 5              | 1.25   | 2.60        | 2.60           | 4.75            |
| 14 x 20        | 6              | 1.50   | 3.20        | 3.20           | 6.00            |
| 15 x 23        | 6              | 1.70   | 3.40        | 3.40           | 6.25            |
| 15 x 25        | 6              | 1.75   | 3.60        | 3.60           | 6.50            |
| 15 x 27        | 6              | 2.00   | 4.25        | 4.25           | 7.25            |
| 16 x 24        | 6              | 1.80   | 4.00        | 4.00           | 6.50            |
| 16 x 28        | 6              | 2.10   | 4.50        | 4.50           | 7.50            |
| 16 x 30        | 6              | 2.25   | 4.75        | 4.75           | 7.75            |
| 18 x 30        | 6              | 2.50   | 5.10        | 5.10           | 8.50            |
| 18 x 32        | 6              | 3.00   | 6.25        | 6.25           | 9.50            |
| 18 x 36        | 6              | 3.00   | 6.50        | 6.50           | 9.50            |
| 18 x 42        | 6              | 4.00   | 8.75        | 8.75           | 11.75           |
| 19 x 38        | 6              | 3.80   | 8.00        | 8.00           | 11.00           |
| 20 x 30        | 6              | 3.00   | 6.25        | 6.25           | 9.00            |
| 20 x 36        | 6              | 3.70   | 7.75        | 7.75           | 10.50           |
| 20 x 40        | 6              | 4.00   | 8.50        | 8.50           | 11.50           |
| 20 x 42        | 6              | 4.25   | 9.00        | 9.00           | 12.00           |
| 22 x 42        | 6              | 4.25   | 9.00        | 9.00           | 12.00           |
| 24 x 48        | 6              | 5.75   | 12.25       | 12.25          | 15.00           |
| 24 x 50        | 6              | 7.50   | 16.00       | 16.00          | 18.00           |
| 22 x 62        | 6              | 10.75  | 22.00       | 22.00          | 26.00           |
| 22 x 76        | 6              | 15 00  | 32.00       | 32.00          | .....           |

Add to List, if with Patent Overflow: Plain, 1.00; Galvanized, 1.25; Gray Enameled, 1.25; White Enameled, 1.50.

Add, if with Plug Strainer: Plain, 20c.; Galvanized, 25c.; Enameled, 50c.

HALF-CIRCLE SINK.

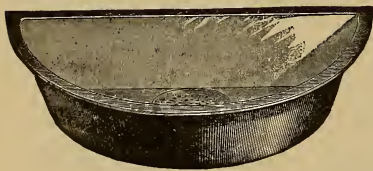


Fig. 487.

| Number. | Back. | Width. | Depth. | Price, Plain. | Price, Galvanized. | Price, Gray Enameled. | Price, Enameled. |
|---------|-------|--------|--------|---------------|--------------------|-----------------------|------------------|
| 1.....  | 24 in | 14 in. | 6 in.  | 1.50          | 3.25               | 3.25                  | 6.00             |
| 2.....  | 27 "  | 14 "   | 6 "    | 1.80          | 3.90               | 3.90                  | 7.00             |
| 3.....  | 28 "  | 16 "   | 6 "    | 2.00          | 4.50               | 4.50                  | 8.00             |
| 4.....  | 31½"  | 17 "   | 6 "    | 2.25          | 4.75               | 4.75                  | 9.00             |

CORNER SINK.

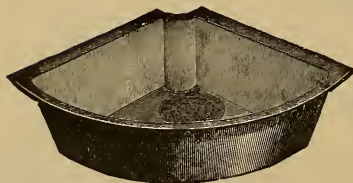


Fig. 488.

| Number.    | Side.  | Front. | Depth. | Price, Plain. | Price, Galvanized. | Price, Gray Enameled. | Price, Enameled. |
|------------|--------|--------|--------|---------------|--------------------|-----------------------|------------------|
| 1. . . . . | 17 in. | 25 in. | 6 in.  | 1.25          | 2.75               | 2.75                  | 6.00             |
| 2.....     | 20 "   | 28 "   | 6 "    | 1.75          | 3.50               | 3.50                  | 7.00             |
| 3.....     | 22 "   | 31 "   | 6½ "   | 2.10          | 4.20               | 4.20                  | 8.00             |

SQUARE SLOP SINK.

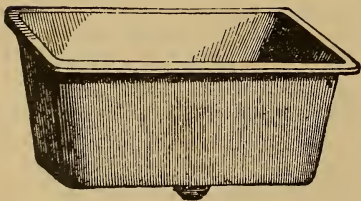


Fig. 489.

|                                 |         |         |         |
|---------------------------------|---------|---------|---------|
| Size, inches.....               | 16 x 16 | 20 x 14 | 24 x 20 |
| Depth, inches.....              | 10      | 12      | 13      |
| Price, Plain, each.....         | 2.70    | 3.50    | 5.00    |
| Price, Galvanized, each.....    | 5.25    | 6.50    | 9.50    |
| Price, Gray Enameled, each..... | 5.25    | 6.50    | 9.50    |
| Price, Enameled, each.....      | 7.50    | 8.50    | 11.50   |

Furnished with Patent Overflow or Plug Strainer same extra Price as Square Sinks.

SQUARE SLOP SINK.

With Rounded Corners and 4 inch Outlet in Center.



Fig. 490.

|                                 |         |         |
|---------------------------------|---------|---------|
| Size, inches.....               | 16 x 16 | 20 x 22 |
| Depth, inches .....             | 10      | 12      |
| Price, Plain, each.....         | 3.25    | 5.00    |
| Price, Galvanized, each.....    | 6.00    | 10.00   |
| Price, Grey Enameled, each..... | 6.00    | 10.00   |

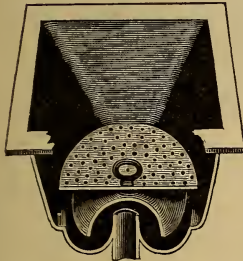


Fig. 491.

HARRIS SLOP SINK.

With Bell Trap.

|                   |         |         |         |
|-------------------|---------|---------|---------|
| Size, inches..... | 12 x 12 | 14 x 14 | 16 x 16 |
| Price, each....   | 2.00    | 2.25    | 2.50    |

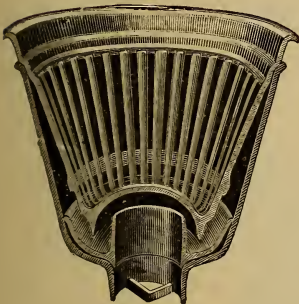


Fig. 492.

SLOP HOPPER.

With Bell Trap.

|                  |      |
|------------------|------|
| Price, each..... | 3.50 |
|------------------|------|

CESSPOOL.

WITH BELL TRAP.

Sectional Cut.

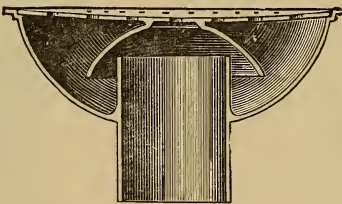
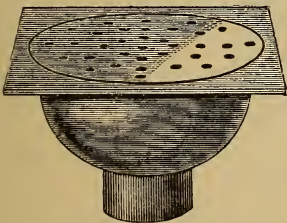


Fig. 493.

|                                           |      |
|-------------------------------------------|------|
| Size, 4 x 4, 1 1/4 inch Outlet, each..... | .50  |
| " 6 x 6, 1 1/2 " " " .....                | .75  |
| " 9 x 9, 3 " " " .....                    | 1.00 |
| " 13 x 13, 4 " " " .....                  | 2.50 |

EXTRA HEAVY CESSPOOL.

With Bell Trap and Grating.

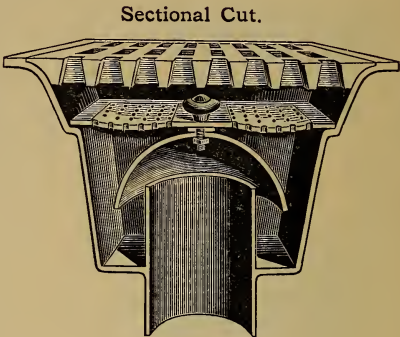
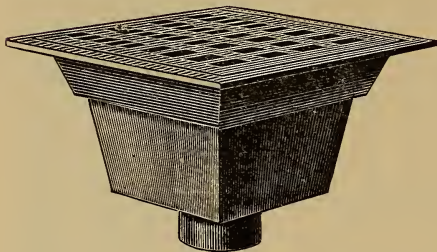


Fig. 494.

|                                                            |       |
|------------------------------------------------------------|-------|
| Size, 16 x 16,    Depth, 10 inch, 4 inch Outlet, each..... | 4.50  |
| Size, 27 x 19½, Depth, 14 inch, 4 inch Outlet, each.....   | 14.00 |

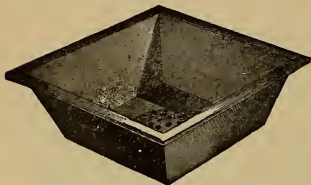


Fig. 495.

HYDRANT CESSPOOL.

|                    |         |         |         |
|--------------------|---------|---------|---------|
| Size, inches.....  | 12 x 12 | 14 x 14 | 16 x 16 |
| Depth, inches....  | 6       | 6       | 6       |
| Price, Plain ..... | 1.00    | 1.15    | 1.30    |

SEWER TRAPS.

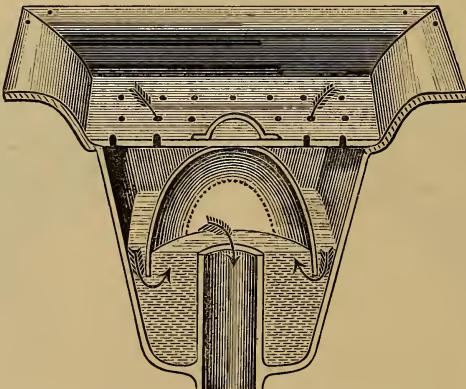


Fig. 496.

|                                 |      |
|---------------------------------|------|
| Size, 16 x 16 inches, each..... | 2.50 |
|---------------------------------|------|



CESSPOOL PLATES.



Fig. 497.



Fig. 498.

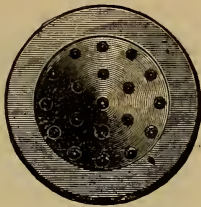


Fig. 499.

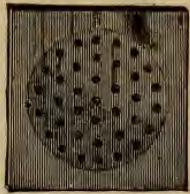


Fig. 500.

|                   |     |                   |     |
|-------------------|-----|-------------------|-----|
| Size, inches..... | 6x8 | Size, inches..... | 6x6 |
| Price, each.....  | .50 | Price, each.....  | .30 |

VENTILATION PLATE.

To fit Hub End of Soil Pipe.

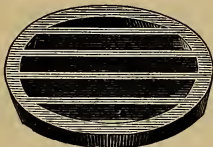


Fig. 501.

|                   |     |     |     |
|-------------------|-----|-----|-----|
| Size, inches..... | 4   | 5   | 6   |
| Price, each.....  | .20 | .35 | .50 |

SINK BACK.



Fig. 502.

| Sizes.                     | Plain. | Galvanized. | Gray Enam'd. | White Enam'd. |
|----------------------------|--------|-------------|--------------|---------------|
| Price, 30 inch, each ..... | 2.00   | 4.00        | 4.00         | 5.00          |
| “ 36 “ “ .....             | 2.75   | 5.00        | 5.00         | 6.00          |
| “ 42 “ “ .....             | 3.50   | 6.00        | 6.00         | 7.00          |
| “ 48 “ “ .....             | 4.25   | 7.00        | 7.00         | 8.00          |

SINK LEG.

For All Sizes of Sinks.



Fig. 503.

|                              |      |
|------------------------------|------|
| Price, Plain, each .....     | .50  |
| Price, Galvanized, each..... | 1.00 |



SINK BRACKET.

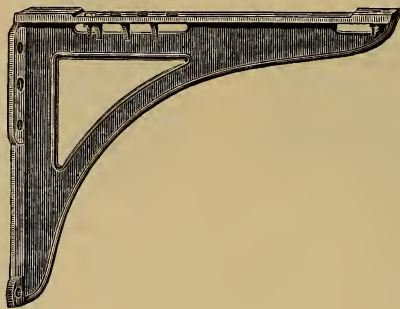


Fig. 504.

|                                                     | Plain. | Galvanized. |
|-----------------------------------------------------|--------|-------------|
| Price, No. 1, Takes Sink up to 18 inches wide ..... | .60    | 1.00        |
| “ “ 2, “ “ “ 23 “ .....                             | .75    | 1.25        |
| “ “ 3, “ “ “ 32 “ .....                             | 1.00   | 1.50        |

SINK STRAINER.



Fig. 505.

|                                      |      |
|--------------------------------------|------|
| Price, Plain, per doz.....           | 1.50 |
| Price, Galvanized, per doz. ....     | 2.60 |
| Price, Gray Enameled, per doz. ....  | 2.60 |
| Price, White Enameled, per doz. .... | 3.00 |

SINK COUPLING.

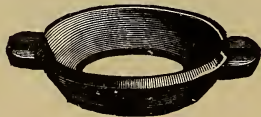


Fig. 506.

|                                  |      |
|----------------------------------|------|
| Price, Plain, per doz.....       | 1.50 |
| Price, Galvanized, per doz. .... | 2.00 |

SINK COUPLING.

Tapped for Iron Pipe Waste.



Fig. 507.

|                   |     |
|-------------------|-----|
| Price, each ..... | .75 |
|-------------------|-----|

IRON SINK PLUG.

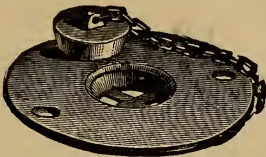


Fig. 508.

|                                     |      |
|-------------------------------------|------|
| Price, Plain, per doz.....          | 3.25 |
| Price, Galvanized, per doz.....     | 5.00 |
| Price, Gray Enameled, per doz.....  | 5.00 |
| Price, White Enameled, per doz..... | 6.00 |

SINK BOLT.



Fig. 509.

|                     |     |
|---------------------|-----|
| Price, per doz..... | .40 |
|---------------------|-----|

SOAP CUP.

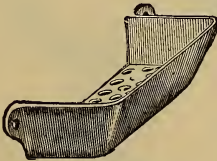


Fig. 510.

|                                 |      |
|---------------------------------|------|
| Price, Plain, per doz.....      | 2.50 |
| Price, Galvanized, per doz..... | 4.00 |

STREET WASHER BOX.

STOP COCK BOX.

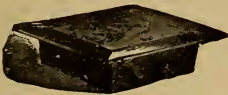


Fig. 511.



Fig. 512.

|                  |      |                  |     |
|------------------|------|------------------|-----|
| Price, each..... | 1.25 | Price, each..... | .50 |
|------------------|------|------------------|-----|

Plumber's address cast on Covers to order.

STRAP SOLDER MOULD.

Half Round Bar.



Fig. 513.

|                   |      |
|-------------------|------|
| Price, each ..... | 3.00 |
|-------------------|------|

SOLDER POT.



Fig. 514.

|                    |     |     |      |      |
|--------------------|-----|-----|------|------|
| Size, inches... .. | 5   | 6   | 9    | 12   |
| Price, each.....   | .50 | .65 | 1.30 | 3.00 |

BOILER STAND.

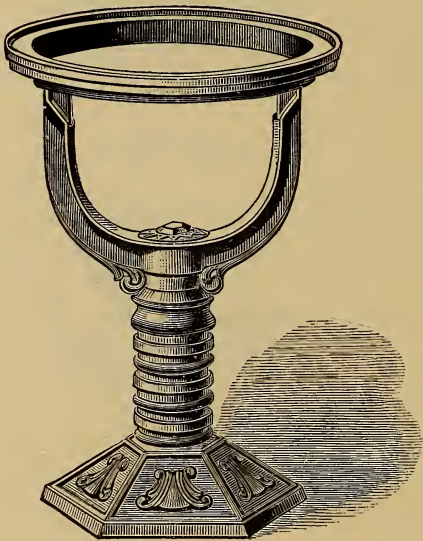


Fig. 515.

| SIZE.             |                                           | Price,<br>Plain. | Price,<br>Galvanized. |
|-------------------|-------------------------------------------|------------------|-----------------------|
| 12 inch Ring, for | 18, 24 and 30 gallon Boilers.....         | 1.25             | 2.50                  |
| 13 " " "          | 35 gallon Boilers.....                    | 1.35             | 2.60                  |
| 14 " " "          | 40 gallon Boilers .....                   | 1.40             | 2.70                  |
| 16 " " "          | 52 and 63 gallon Boilers.....             | 1.85             | 3.25                  |
| 18 " " "          | 66 gallon Boilers.....                    | 2.00             | 3.80                  |
| 20 " " "          | 82 gallon Boilers .....                   | 2.25             | 4.50                  |
| 22 " " "          | 100 and 120 gallon Boilers ...            | 2.75             | 5.00                  |
| 24 " " "          | 120, 144, 165 and 192 gallon Boilers..... | 3.50             | 6.50                  |

## IRON BATH TUB.

French Pattern.

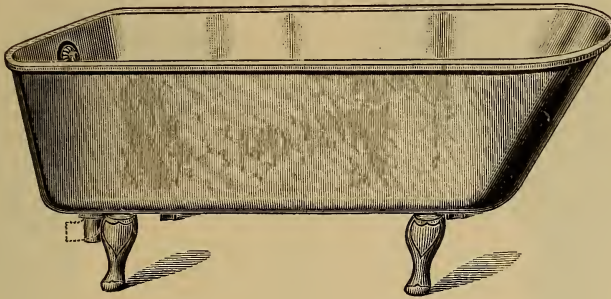


Fig. 516.

| Sizes.....                  | 4 ft. | 4½ ft. | 5 ft. | 5½ ft. | 6 ft. |
|-----------------------------|-------|--------|-------|--------|-------|
| Price, Painted .....        | 18.00 | 20.00  | 22.00 | 24.00  | 26.00 |
| Price, Porcelain lined..... | 34.00 | 38.00  | 42.00 | 46.00  | 50.00 |
| If with Wood Rim, add.....  | 9.00  | 9.50   | 10.00 | 11.00  | 12.00 |

If tapped at bottom for Iron Pipe, Hot and Cold Water Supply and Waste, 1.50.

All French Tubs are 23 inches wide, 19 inches deep, and 25 inches from floor to top of rim.

## IRON BATH TUB.

Plain Pattern.

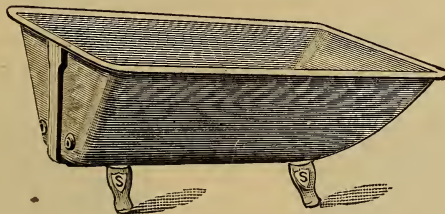


Fig. 517.

| Sizes....                   | 4½ ft. | 5½ ft. | 6 ft. |
|-----------------------------|--------|--------|-------|
| Price, Plain.....           | 18.00  | 20.00  | 22.00 |
| Price, Porcelain Lined..... | 33.00  | 36.00  | 42.00 |

If tapped at bottom for Iron Pipe Hot and Cold Water Supply and Waste, 1.50.

All Plain Pattern Tubs are 26 inches wide, 19 inches deep, and 23 inches from floor to top of rim.



## IRON WASH STANDS.

### HALF CIRCLE AND CORNER WASH STANDS.

On Standard, Patent Overflow, Nickel Plated Plug, Rubber Stopper and Brass Couplings.



Fig. 518.

Height to front of Slab, 30 in. Height to top of Back, 33 in. Length of Back, 23 in.  
Diameter of Bowl, 12½ in.

Enameled, on Bronzed Standard ..... 11.50



Fig. 519.

Height to front of Slab, 30 in. Height to top of Back, 34 in. Length of Side, 16 in.  
Diameter of Bowl, 12½ in.

Enameled, on Bronzed Standard ..... 11.50

## IRON SLABS AND BOWLS.

Patent Overflow, Nickel Plated Plug, Rubber Stopper and Brass Coupling.

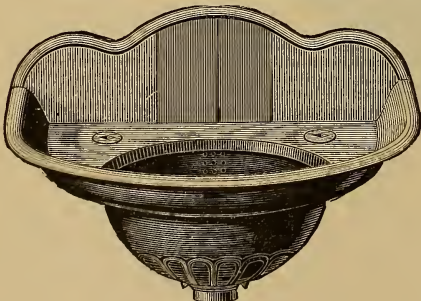


Fig. 520.

Length of Back, 23 in. Diameter of Bowl, 12½ in.

Enameled, Bronzed Outside..... 9.50

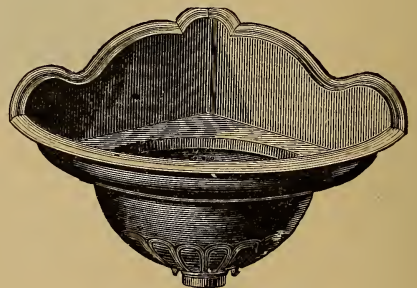


Fig. 521.

Length of Side, 16 in. Diameter of Bowl, 12½ in.

Enameled, Bronzed Outside..... 9.50

## IRON WASH STANDS.

## HALF CIRCLE AND CORNER WASH STANDS.

On Standard, Patent Overflow, Nickel Plated Plug, Rubber Stopper and Brass Couplings.



Fig. 522.

Height to front of Slab, 28 in. Height to top of Back, 32 in. Length of Back, 19 in.  
Diameter of Bowl,  $12\frac{1}{2}$  in.

Enameled, on Bronzed Standard..... 9.50



Fig. 523.

Height to front of Slab, 28 in. Height to top of Back, 32 in. Length on Side,  $13\frac{1}{2}$  in.  
Diameter of Bowl,  $12\frac{1}{2}$  in.

Enameled, on Bronzed Standard..... 9.50

## IRON SLABS AND BOWLS.

Patent Overflow, Nickel Plated Plug, Rubber Stopper and Brass Coupling.



Fig. 524.

Length of Back, 19 in. Diameter of Bowl,  $12\frac{1}{2}$  in.

Enameled, Bronzed Outside..... 7.50

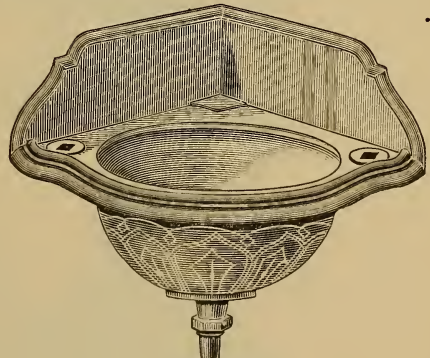


Fig. 525.

Length on Side,  $12\frac{1}{2}$  in. Diameter of Bowl,  $12\frac{1}{2}$  in.

Enameled, Bronzed Outside..... 7.50



## IRON WASH STAND.

On Standard, Patent Overflow, Nickel Plated Plug, Rubber Stopper and Brass Couplings.



Fig. 526.

Height, 29 inch. Length of Back,  $24\frac{1}{2}$  inch. Diameter of Bowl,  $12\frac{1}{2}$  inch.  
 Enameled on Bronzed Standard..... 11.00

## DOUBLE IRON WASH STAND.

On Standard, Patent Overflow, Nickel Plated Plug, Rubber Stopper and Brass Couplings.



Fig. 527.

Height, 32 inch. Length of Back, 41 inch. Diameter of Bowls,  $12\frac{1}{2}$  inch.  
 Enameled, with Bronzed Standards..... 23.00

**IRON WASH STAND ON FRAME.**

On Standard, Patent Overflow, Nickel Plated Plug, Rubber Stopper and Brass Couplings.



Fig. 528.

Height, 31 inch. Length on Back,  $24\frac{1}{2}$  inch. Diameter of Bowl,  $12\frac{1}{2}$  inch.

Enameled, on Bronzed Frame..... 11.00

**DOUBLE IRON WASH STAND ON FRAME.**

On Standard, Patent Overflow, Nickel Plated Plug, Rubber Stopper and Brass Couplings.

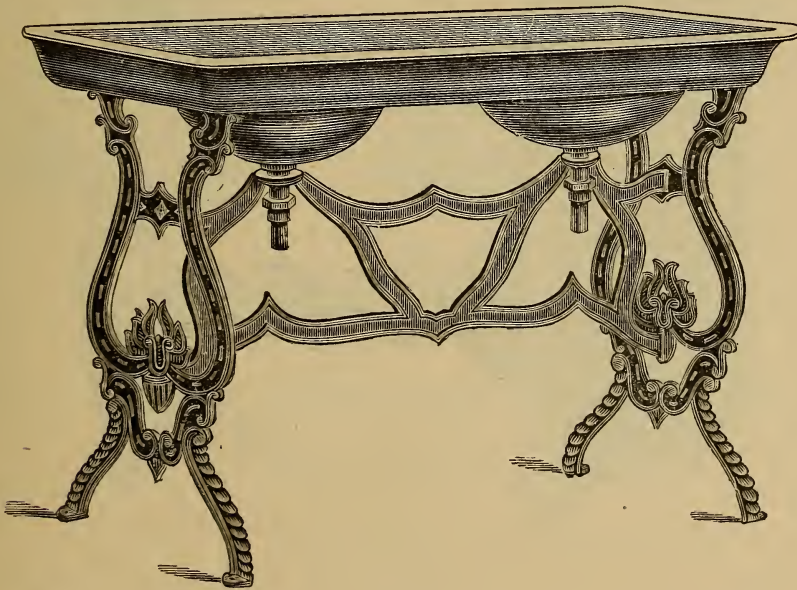


Fig. 529.

Height,  $31\frac{1}{2}$  inch. Length of Back, 46 inch. Diameter of Bowls,  $12\frac{1}{2}$  inch.

Enameled, with Bronzed Frame..... 22.00



SECTIONAL IRON WASH STAND.

ON STANDARD, PATENT OVERFLOW, NICKEL PLATED PLUG, RUBBER STOPPER AND BRASS COUPLINGS.

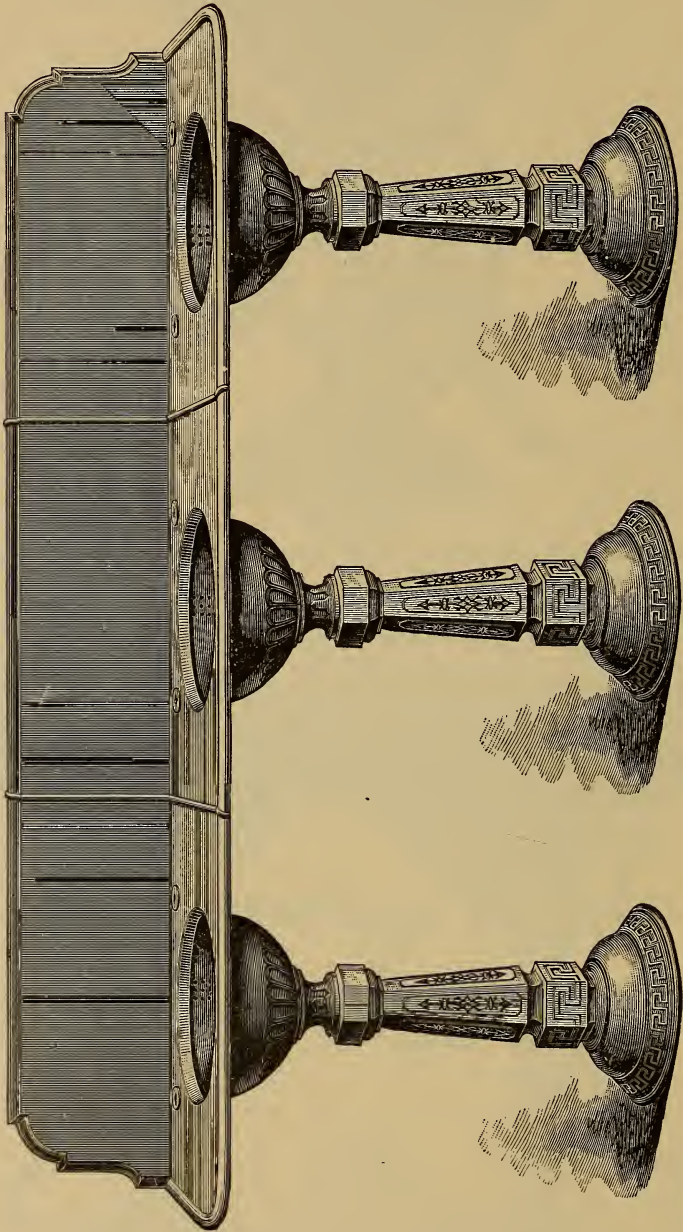


Fig. 53o.

Height to front of Slab, 28 inch.    Height to top of Back, 38¼ inch.    Length, per Section, 24 inch.  
Diameter of Bowls, 12½ inch.

## SECTIONAL IRON WASH STAND.

On Standard, Patent Overflow, Nickel Plated Plug, Rubber Stopper and Brass Coupling.

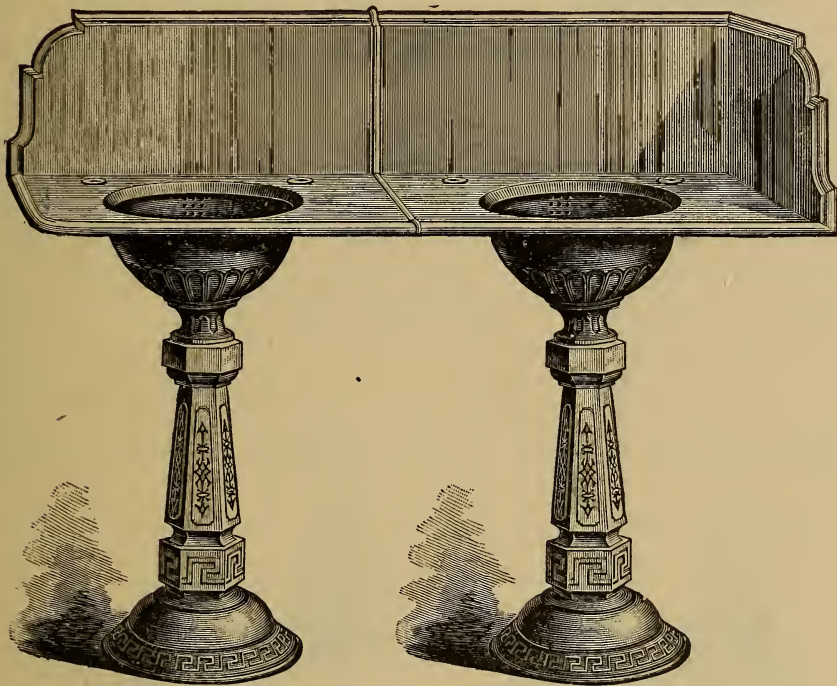


Fig. 531.

Height to front of Slabs, 28 in. Height to top of Back,  $38\frac{1}{4}$  in. Length of Back 48 in.

Diameter of Bowls,  $12\frac{1}{2}$  in.

Price complete as shown, (with End Piece on right hand side.)

Enameled, with Plated Union Strips, on Bronzed Standards ..... 33.00

Additional Sections furnished at one-half of above price.

## SECTIONAL IRON WASH STAND.

On Standard, Patent Overflow, Nickel Plated Plug, Rubber Stopper and Brass Coupling.

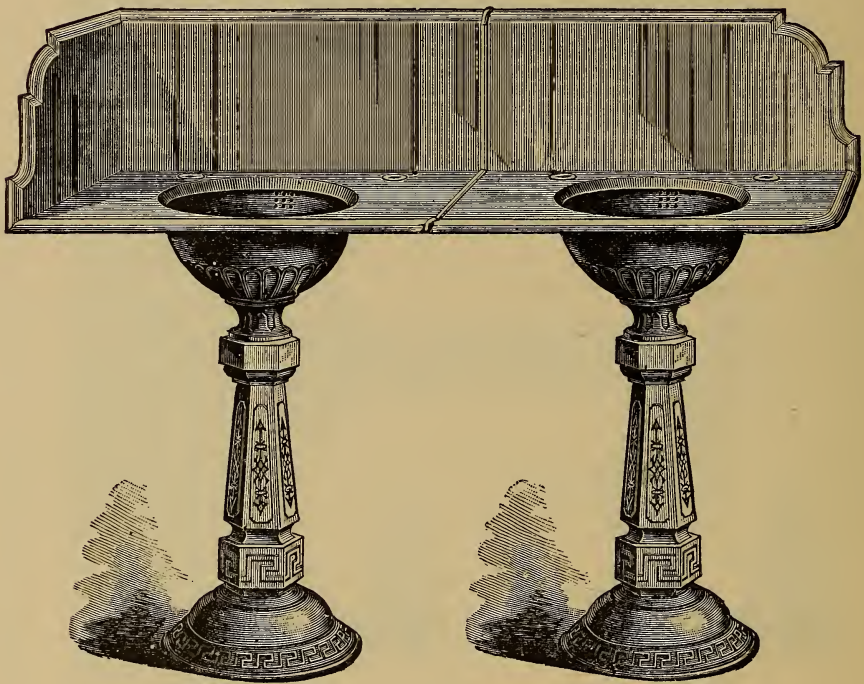


Fig. 532.

Height to front of Slabs, 28 in. Height to top of Back,  $38\frac{1}{4}$  in. Length of Back, 48 in.

Diameter of Bowls,  $12\frac{1}{2}$  in.

Price complete as shown, (with End Piece on left-hand side.)

Enameled, with Plated Union Strip, on Bronzed Standards..... 33.00

Additional Sections furnished at one-half of above price.



### IRON WASH BASINS.

Common Overflow, Enameled.

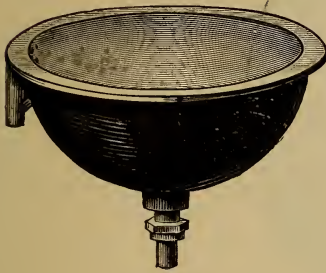


Fig. 533.

Patent Overflow Rubber Plug, Enameled.

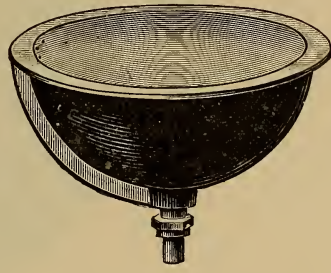


Fig. 534.

|                            |      |
|----------------------------|------|
| Price, 14 inch, each. .... | 3.00 |
|----------------------------|------|

|                           |      |
|---------------------------|------|
| Price, 14 inch, each..... | 3.50 |
|---------------------------|------|

The above prices include Plated Plugs and Stoppers.

### IRON HALF CIRCLE URINAL.

Plain and Enameled.

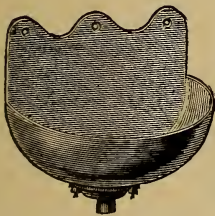


Fig. 535.

### IRON CORNER URINAL.

Plain and Enameled.

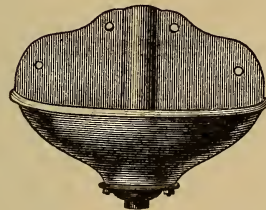


Fig. 536.

|                            |      |      |
|----------------------------|------|------|
| Size, inches.....          | 12   | 15   |
| Price, Plain, each.....    | 1.15 | 1.50 |
| Price, Enameled, each..... | 2.50 | 3.00 |

|                           |      |      |
|---------------------------|------|------|
| Size, inches.....         | 9    | 12   |
| Price, Plain, each... ..  | 1.15 | 1.45 |
| Price, Enameled, each.... | 2.25 | 2.75 |



IRON HALF CIRCLE LIPPED URINAL.

With Brass Supply and Waste Couplings.

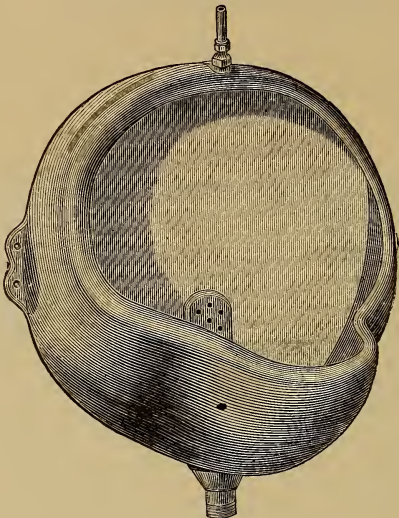


Fig. 537.

Size, 18 x 17 inches on back.

---

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| Price, Plain.....                                                   | 6.00  |
| Price, Enameled.....                                                | 10.00 |
| Price, Enameled, Electro-Bronzed Outside, to protect from rust..... | 12.00 |

---

IRON HALF CIRCLE LIPPED URINAL.

Brass Supply and Waste Couplings. With Ventilating Hood.

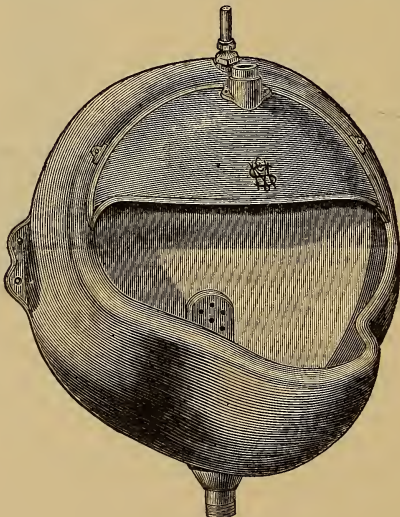


Fig. 538.

---

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| Price, Plain.....                                                   | 7.00  |
| Price, Enameled.....                                                | 11.00 |
| Price, Enameled, Electro Bronzed Outside, to protect from rust..... | 13.00 |

---

IRON PRIVY SINK.

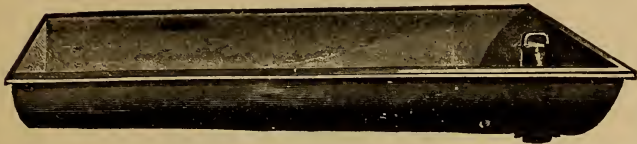


Fig. 539.

| Single.      |        |        |        | Double.                                                                                                                                                                                                                                                                                                                                                                    |        |        |        |
|--------------|--------|--------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------|--------|
| Length.      | Width. | Depth. | Price. | Length.                                                                                                                                                                                                                                                                                                                                                                    | Width. | Depth. | Price. |
| 4 feet ..... | 16 in. | 12 in. | 16.00  | 6 feet.....                                                                                                                                                                                                                                                                                                                                                                | 31 in. | 11 in. | 30.00  |
| 4½ " .....   | "      | "      | 17.00  | 7 " .....                                                                                                                                                                                                                                                                                                                                                                  | "      | "      | 38.00  |
| 5 " .....    | "      | "      | 18.00  | 8 " .....                                                                                                                                                                                                                                                                                                                                                                  | "      | "      | 42.00  |
| 6 " .....    | "      | "      | 20.00  | 9 " .....                                                                                                                                                                                                                                                                                                                                                                  | "      | "      | 46.00  |
| 7 " .....    | "      | "      | 25.00  | 10 " .....                                                                                                                                                                                                                                                                                                                                                                 | "      | "      | 50.00  |
| 8 " .....    | "      | "      | 28.00  | 11 " .....                                                                                                                                                                                                                                                                                                                                                                 | "      | "      | 54.00  |
| 9 " .....    | "      | "      | 34.00  | 12 " .....                                                                                                                                                                                                                                                                                                                                                                 | "      | "      | 58.00  |
| 10 " .....   | "      | "      | 37.00  | <p>Lengths over 12 feet are made in two sections.<br/>Add for Patent Lifting Attachment:<br/>Single,...4.00   Double,...5.00<br/><br/>If wanted can furnish Single Privy Sinks 17 inches wide; and lengths over 7 feet, 14 inches deep, and Double Privy Sinks 33½ inches wide and 14 inches deep. The sizes named in above list are the Standard, and generally used.</p> |        |        |        |
| 11 " .....   | "      | "      | 40.00  |                                                                                                                                                                                                                                                                                                                                                                            |        |        |        |
| 12 " .....   | "      | "      | 43.00  |                                                                                                                                                                                                                                                                                                                                                                            |        |        |        |
| 13 " .....   | "      | "      | 50.00  |                                                                                                                                                                                                                                                                                                                                                                            |        |        |        |
| 14 " .....   | "      | "      | 53.00  |                                                                                                                                                                                                                                                                                                                                                                            |        |        |        |
| 15 " .....   | "      | "      | 56.00  |                                                                                                                                                                                                                                                                                                                                                                            |        |        |        |
| 16 " .....   | "      | "      | 59.00  |                                                                                                                                                                                                                                                                                                                                                                            |        |        |        |
| 17 " .....   | "      | "      | 62.00  |                                                                                                                                                                                                                                                                                                                                                                            |        |        |        |
| 18 " .....   | "      | "      | 70.00  |                                                                                                                                                                                                                                                                                                                                                                            |        |        |        |
| 19 " .....   | "      | "      | 73.00  |                                                                                                                                                                                                                                                                                                                                                                            |        |        |        |
| 20 " .....   | "      | "      | 80.00  |                                                                                                                                                                                                                                                                                                                                                                            |        |        |        |
| 21 " .....   | "      | "      | 83.00  |                                                                                                                                                                                                                                                                                                                                                                            |        |        |        |
| 22 " .....   | "      | "      | 86.00  |                                                                                                                                                                                                                                                                                                                                                                            |        |        |        |
| 23 " .....   | "      | "      | 89.00  |                                                                                                                                                                                                                                                                                                                                                                            |        |        |        |
| 23½ " .....  | "      | "      | 92.00  |                                                                                                                                                                                                                                                                                                                                                                            |        |        |        |

IRON URINALS FOR PUBLIC PLACES.

Plain and Enameled.

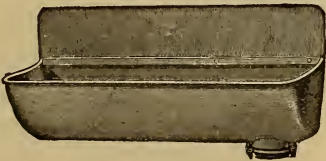


Fig. 540.

|                            |       |       |
|----------------------------|-------|-------|
| Number.....                | 1     | 2     |
| Length, inches .....       | 42    | 48    |
| Price, Plain, each ...     | 8.00  | 9.00  |
| Price, Enameled, each..... | 21.00 | 25.00 |

IRON HOPPER.

Philadelphia Pattern, with Side Arm.

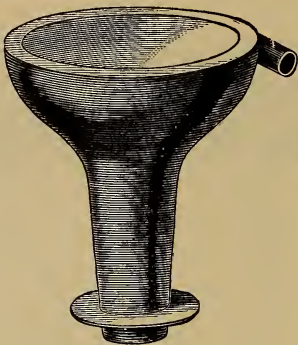


Fig. 541.

Height, 16 inches. Diameter on top, 14 inches. Outlet, 3 1/4 inches.

Price, Enameled..... 2.00

IRON HOPPER.

New Pattern, with Side Arm.

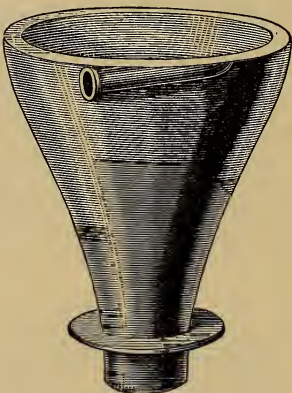


Fig. 542.

Height, 16 1/2 inches. Diameter on top, 14 inches. Outlet, 3 1/4 inches.

Price, Enameled..... 2.25

IRON FRENCH, OR SHORT HOPPER.

Plain, Painted, Galvanized and Enameled.

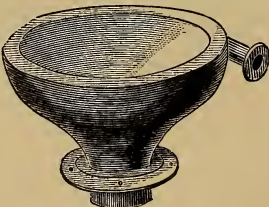


Fig. 543.

Height, 8 inches. Outlet for 4 inch Soil Pipe.

Price, Enameled..... 2.75



LONG OVAL FLUSHING RIM IRON HOPPER.

With Brass Supply Connection. For Iron or Lead Supply Pipe. For Direct Pressure or Tank Supply.

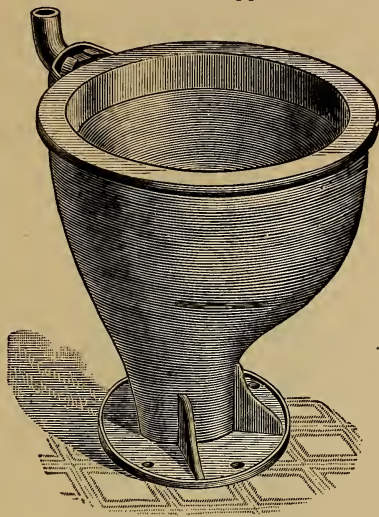


Fig. 544.

|                                          |      |
|------------------------------------------|------|
| Price, Enameled.....                     | 5.50 |
| Price, Enameled, with Hardwood Rim ..... | 7.00 |

SHORT OVAL FLUSHING RIM HOPPER.

With Brass Supply Connection. For Iron or Lead Supply Pipe. For Direct Pressure or Tank Supply. Furnished with full S,  $\frac{3}{4}$  or  $\frac{1}{2}$  S Trap.



Fig. 545.

Height, 16 inches. Outlet, 4 inches.

|                                       |      |                           |      |
|---------------------------------------|------|---------------------------|------|
| Price, Enameled on Painted Trap.....  | 7.25 | Add for Vent on Trap..... | 0.50 |
| Price, Enameled on Enameled Trap..... | 8.50 | Add for Hardwood Rim..... | 1.50 |



IRON HOPPER VALVE CLOSET.

STRAIGHT.

Self-Raising Round Seat.



Fig. 546.

Price, Enameled, each..... 10.00

IRON HOPPER VALVE CLOSET.

WITH TRAP.

Self-Raising Round Seat.

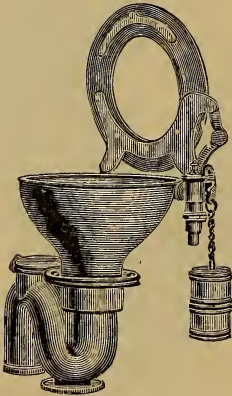


Fig. 547.

Price, Enameled, each..... 11 00

IRON FLUSHING RIM HOPPER VALVE CLOSET.

For Prison and Hospital Service.

With Single and Double Acting Valve at Back. Iron Seat balanced to self-raise, and Wood Rim. Substantially made.

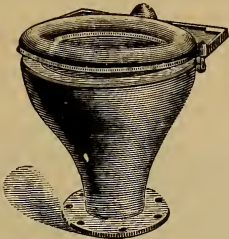


Fig. 548.

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|                            |       |
|----------------------------|-------|
| Price, Enameled, each..... | 12.00 |
|----------------------------|-------|

---

IMPROVED IRON FLUSHING RIM HOPPER VALVE CLOSET.

For Prison and Hospital Use.

On Enameled Elbow. Iron Seat, Hard Wood Rim. The Elbow is tapped for waste water from basin.

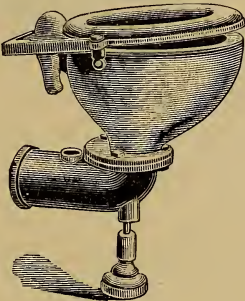


Fig. 549.

---

|                                              |       |
|----------------------------------------------|-------|
| Price, Enameled on Enameled Elbow, each..... | 15.00 |
| Price, Enameled on Painted Trap, each.....   | 14.75 |
| Price, Enameled on Enameled Trap, each.....  | 16.00 |

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Made with 2 inch and 4 inch outlet.

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PHILADELPHIA OR ALL RIGHT VALVE CLOSET.

Brass Levers.

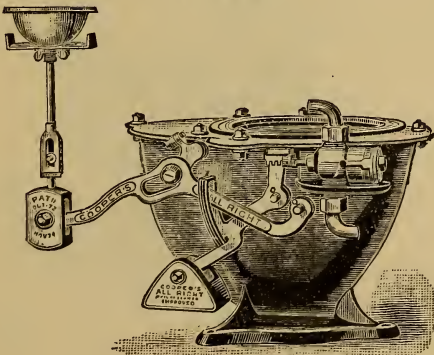


Fig. 550.

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|                                             |       |
|---------------------------------------------|-------|
| Price, with Plated Cup and Pull, each ..... | 10 00 |
|---------------------------------------------|-------|

---

J. B. C. VALVE CLOSET.

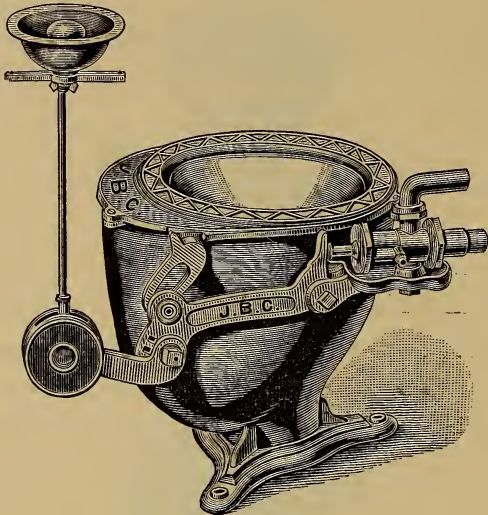


Fig. 551.

Price, with Plated Cup and Pull, each..... 7.00

J. B. C. CISTERN CLOSET.

Complete with Cranks, Ball Lever and Valve.

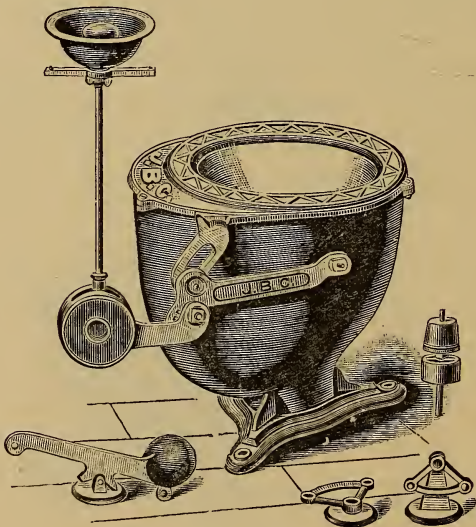


Fig. 552.

Price, with Plated Cup and Pull, each..... 7.00

## ROYAL SANITARY WATER CLOSET.

Sectional Drawing of Valve and Plunger.

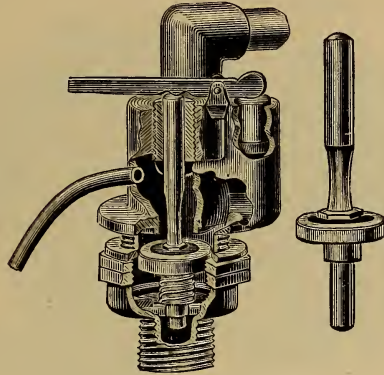


Fig. 553.

The above Figure represents the valve used on our Royal and Eclipse Closets now used extensively throughout the United States. It has many advantages and has given very general satisfaction. It is the most simple Valve made, there being but the two working-parts, the main plunger and the balance plunger. The full pressure from the main is always exerted on the balance plunger and when the pull is raised the balance plunger pressing against the lever assists the float in opening the valve, which as shown opens against the pressure and closes with it. In closing the balance valve pressing against the lever entirely prevents the water hammer so troublesome with most closets under heavy pressure. In case lead chips or other matter gets into the valve it can easily be taken out without taking off the cover of closet by simply unscrewing the lower part of valve when the plunger can be taken out, washer put on or dirt taken from valve. It will work equally well under high or low pressure. From the body of valve there is a wash tube which allows a stream of water to run into reservoir when closet is used thus each time filling the reservoir with pure water. The spring is merely used to keep the main plunger perfectly true in position. We guarantee every Closet to be satisfactory. All of our Closets have Flushing Rim.

The Royal is a Plunger Closet with Side Outlet Bowl and Iron Reservoir. The connection between outlets of basin and reservoir are so close that the contents of bowl are quickly discharged and before reservoir is entirely emptied. The fresh water coming in from wash tube then fills the reservoir with clean water. The Flushing Rim makes a thoroughly good wash that cleans the bowl perfectly.

The Eclipse Closet we consider the best Sanitary-Closet on the market. The outlet is in center of bowl and is closed with a Diaphragm Valve, very simple but perfect in its operation. The failure of a somewhat similar Closet has hurt the sale of the Eclipse, but as it becomes better known our sales have constantly increased. We highly recommend it as a first class Closet in every respect.



ROYAL SANITARY CLOSET.

With Trap.

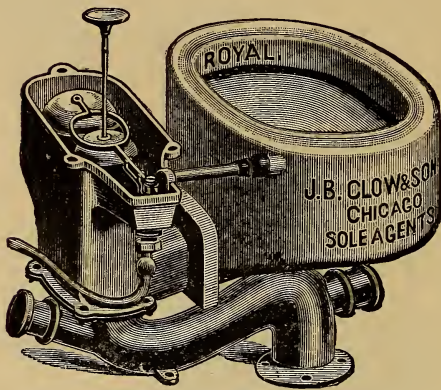


Fig. 554.

---

|                                                                       |       |
|-----------------------------------------------------------------------|-------|
| With Plated Trimmings, Painted Reservoir and Flushing Rim, each.....  | 20.00 |
| With Plated Trimmings, Enameled Reservoir and Flushing Rim, each..... | 25.00 |

---

ROYAL SANITARY CLOSET.

With Offset.

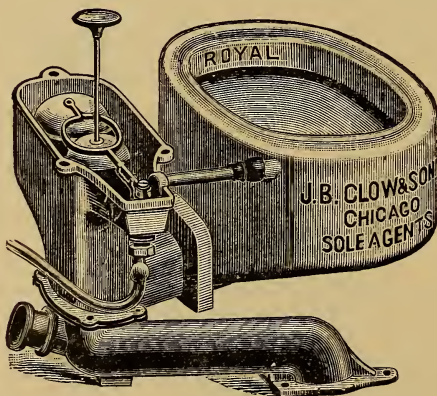


Fig. 555.

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|                                                                      |       |
|----------------------------------------------------------------------|-------|
| With N. P. Trimmings, Painted Reservoir and Flushing Rim, each.....  | 20.00 |
| With N. P. Trimmings, Enameled Reservoir and Flushing Rim, each..... | 25.00 |

---

Drip Trays furnished suitable for all styles Water Closets and Hoppers.

ROYAL SANITARY CLOSET.

Straight.

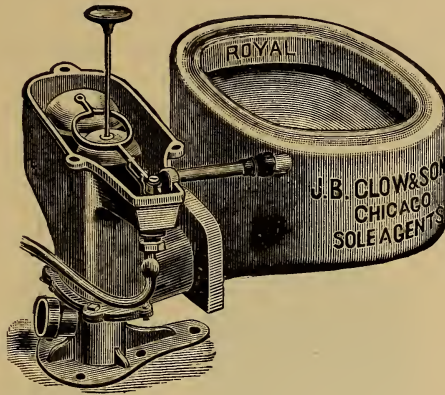


Fig. 556.

---

|                                                                        |       |
|------------------------------------------------------------------------|-------|
| Price, with Plated Trimmings, Painted Reservoir and Flushing Rim.....  | 20.00 |
| Price, with Plated Trimmings, Enameled Reservoir and Flushing Rim..... | 25.00 |

---

ROYAL SANITARY CLOSET.

Outline Drawing.

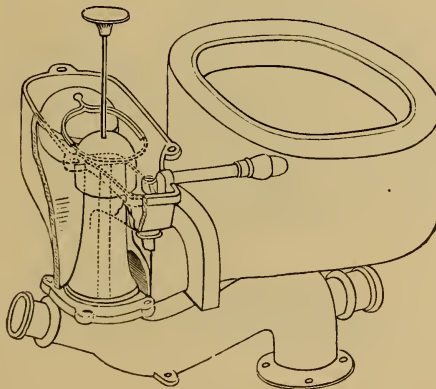


Fig. 557.

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For full description of Valve and Closet, see page 185.

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## FAVORITE SANITARY WATER CLOSET.

Outline Drawing of Valve and Plunger.

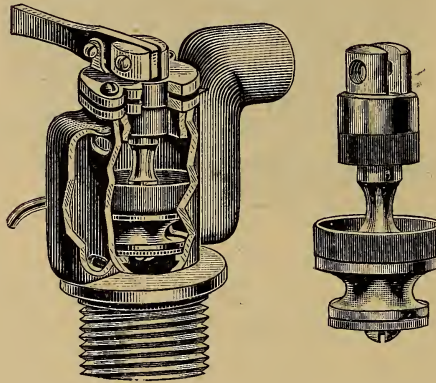


Fig. 558.

The Favorite Valve is a Balance Valve, but on a different principle from the Royal, as in this valve the one Plunger only is used. On the Plunger near the top there is a small Cup Leather that acts as a washer in passing through the upper part of Valve. It will be noticed that the space covered by the second Cup Leather is considerably larger than the seat just below it. The direct pressure from the mains is always exerted between the two cup leathers and as the pressure is of course greater on the large surface of the second Cup Leather as against the small surface of the seat, the Valve will close as soon as relieved of the weight of Float. When the Pull is raised and Float drops, the Valve instantly opens and gives a full stream and closes under the heaviest pressure without the slightest noise. It is the best closet made for muddy or gritty water. As shown it opens with and closes against the pressure. It has a Wash Tube similar to Royal and Eclipse, so that the Reservoir is filled with fresh water every time closet is used. The overflow is on the Syphon principle and is large enough to take off all the water on the highest pressure. We guarantee every closet to give perfect satisfaction.

The Favorite Closet is similar in construction to the Royal, both using the same style Bowl. In the Favorite the overflow is cast in the reservoir instead of being in the plunger. Many prefer it in preference to any other Closet, and in many cases it has been used successfully when every other style has failed.

FAVORITE SANITARY CLOSET.

With Trap.

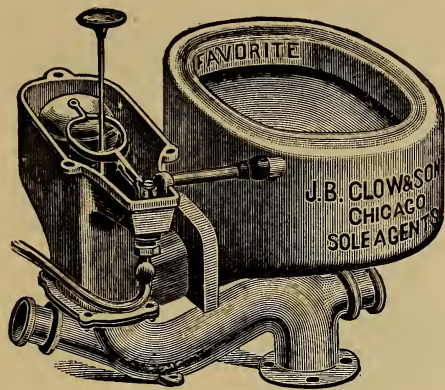


Fig. 559.

---

|                                                                               |       |
|-------------------------------------------------------------------------------|-------|
| Price, with Plated Trimmings, Painted Reservoir and Flushing Rim, each.....   | 20.00 |
| Price, with Plated Trimmings, Enameled Reservoir and Flushing Rim, each... .. | 25.00 |

---

FAVORITE SANITARY CLOSET.

With Offset.

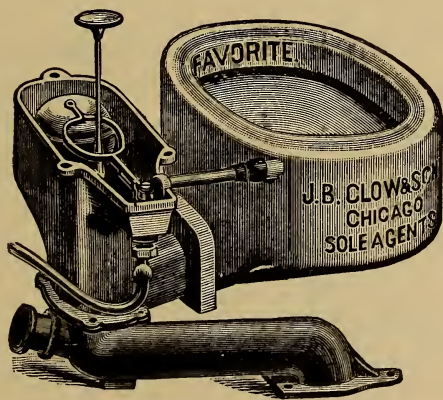


Fig. 560.

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|                                                                              |       |
|------------------------------------------------------------------------------|-------|
| Price, with Plated Trimmings, Painted Reservoir and Flushing Rim, each... .. | 20.00 |
| Price, with Plated Trimmings, Enameled Reservoir and Flushing Rim, each..... | 25.00 |

---



FAVORITE SANITARY CLOSET.

Straight.

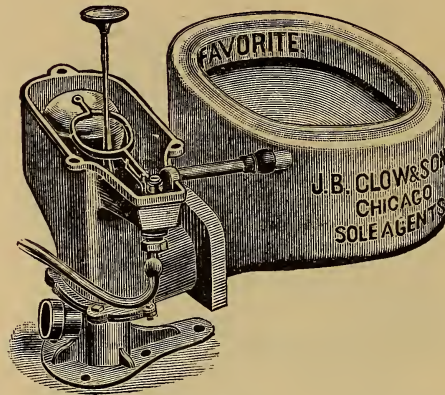


Fig. 561.

---

|                                                                              |       |
|------------------------------------------------------------------------------|-------|
| Price, with Plated Trimmings, Painted Reservoir and Flushing Rim, each ..... | 20.00 |
| Price, with Plated Trimmings, Enameled Reservoir and Flushing Rim, each .... | 25.00 |

---

FAVORITE SANITARY CLOSET.

Outline Drawing.

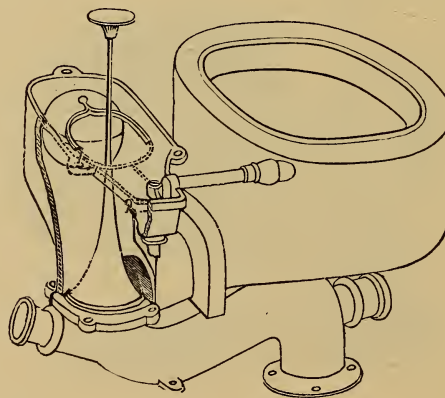


Fig. 562.

For full description of Valve and Closet see page 188.

ECLIPSE SANITARY CLOSET.

Straight.

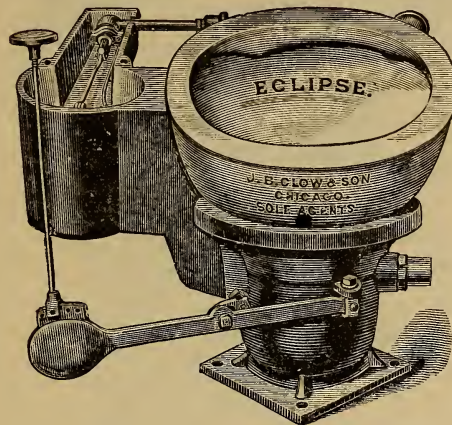


Fig. 563

---

|                                                              |       |
|--------------------------------------------------------------|-------|
| Price, with Plated Trimmings, Painted Reservoir, each .....  | 20.00 |
| Price, with Plated Trimmings, Enameled Reservoir, each ..... | 25.00 |

---

ECLIPSE SANITARY CLOSET.

Outline Drawing.

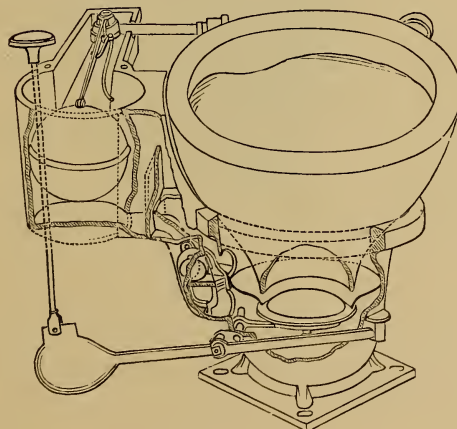


Fig. 564.

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For full description of Closet and Valve, see page 185.

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THE ALEXANDER SANITARY CLOSET.



Fig. 565.

A FEW FEATURES OF ITS EXCELLENCE.

- 1. In the Iron Body Closet, the porcelain bowl, being cemented in an iron casing, makes it secure from breakage, and no possibility of leakage.
- 2. There being a direct outlet from bowl, the contents will be discharged quicker, and the bowl left cleaner than in any other closet.
- 3. There is no possibility of float being fouled, the bottom of bowl and lower valve being thoroughly washed each time by the flush from tank.
- 4. There being a flushing rim, the bowl will fill very quickly.
- 5. The water in the bowl only being used each time, prevents the noise being heard through the house, as in other closets where their whole contents are discharged at once.
- 6. There is less waste of water with better effect than in any other closet.
- 7. The bottom valve is very simple and strongly constructed, and it may be easily rewashered by unscrewing porcelain washer. There is no disconnecting of closet.
- 8. Should the supply of water be shut off, the water in the tank, which rises to same height as in the bowl, would be sufficient to flush the closet several times.
- 9. The rock shaft has a stuffing nut to the trunk, preventing any escape of sewer gas. There is a flow of water that runs between the trunk and bowl on the rock shaft, preventing any paper from lodging there.
- 10. The overflow is large and doubly trapped, with outlet for ventilation.
- 11. The water valve is strong, simple and hardly possible to get out of order, easily rewashed, having sufficient size of ball and leverage to shut off at any pressure and without any noise.
- 12. By adjusting the ball, the height of water can be as desired.

---

|                                              |       |
|----------------------------------------------|-------|
| Price, Iron Body, with Plated Trimmings..... | 20.00 |
| Price, all Earthen,       "       " .....    | 35.00 |

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## ECLIPSE SANITARY CISTERN CLOSET.

With Tank Complete

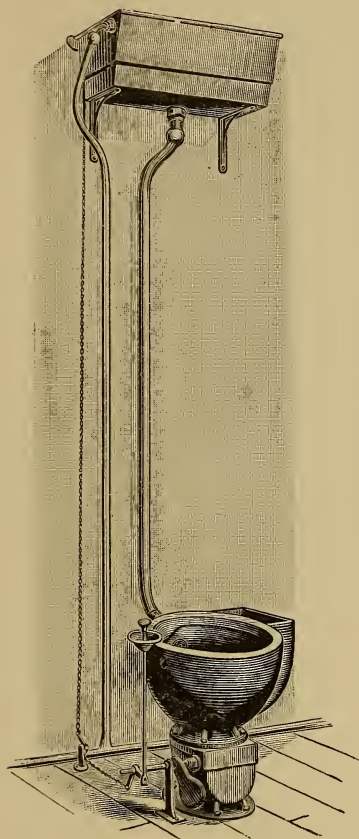


Fig. 566.

---

|                                                              |       |
|--------------------------------------------------------------|-------|
| Price, with Plated Trimmings, Painted Reservoir, each .....  | 30.00 |
| Price, with Plated Trimmings, Enameled Reservoir, each ..... | 35.00 |

---



## CLOW IMPROVED WASH-OUT CLOSET.

WITH TANK COMPLETE.

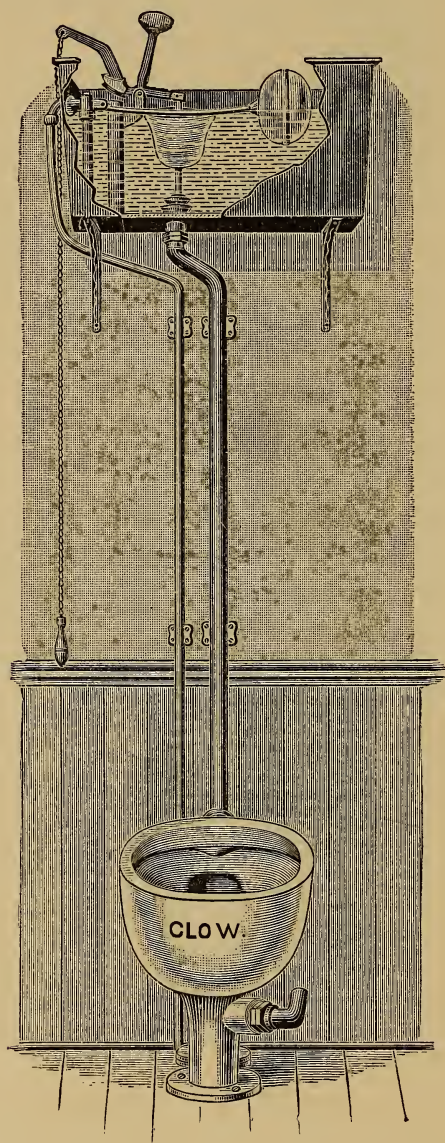


Fig. 567.

|                                                                 |       |
|-----------------------------------------------------------------|-------|
| Price, with Pull and Chain and Fig. 578, Iron Tank.....         | 30.00 |
| Price, with Pull and Chain and Fig. 581, Copper Lined Tank..... | 33.00 |
| Add for Walnut and Cherry Seat and Galvanized Legs.....         | 6.00  |
| Add for Enameled Iron Drip Tray.....                            | 2.50  |

CLOW IMPROVED WASH-OUT CLOSET.

WITH TANK AND SEAT COMPLETE.

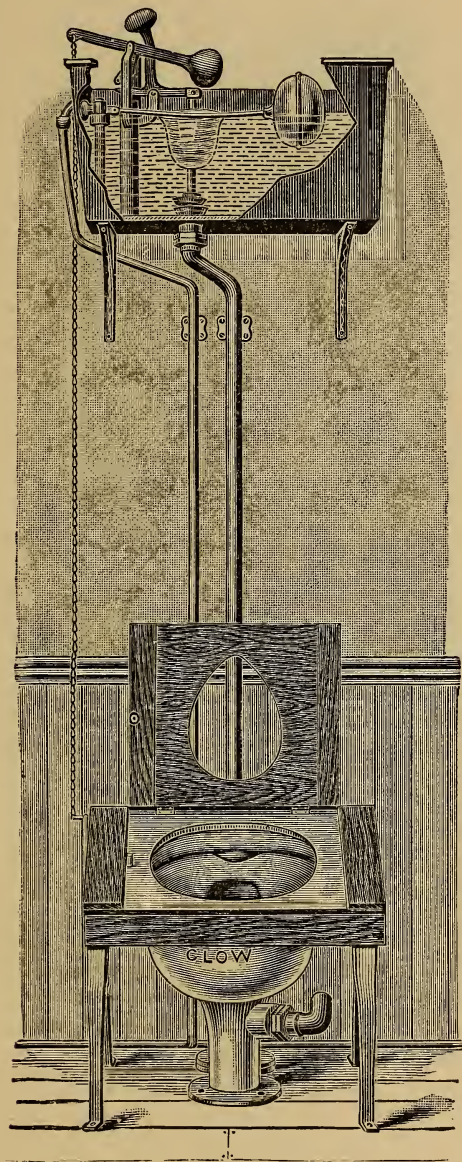


Fig. 568.

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|                                                                                  |       |
|----------------------------------------------------------------------------------|-------|
| Price, with Iron Tank, Fig. 580, Seat and Galvanized Legs, complete.....         | 40.00 |
| Price, with Copper Lined Tank, Fig. 583, Seat and Galvanized Legs, complete..... | 43.00 |
| Deduct if without Seat .....                                                     | 6.00  |
| Add for Enameled Drip Tray.....                                                  | 2.50  |

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CHICAGO WASH-OUT CLOSET.

Earthen Bowl and Iron Trap, with Tank Complete.

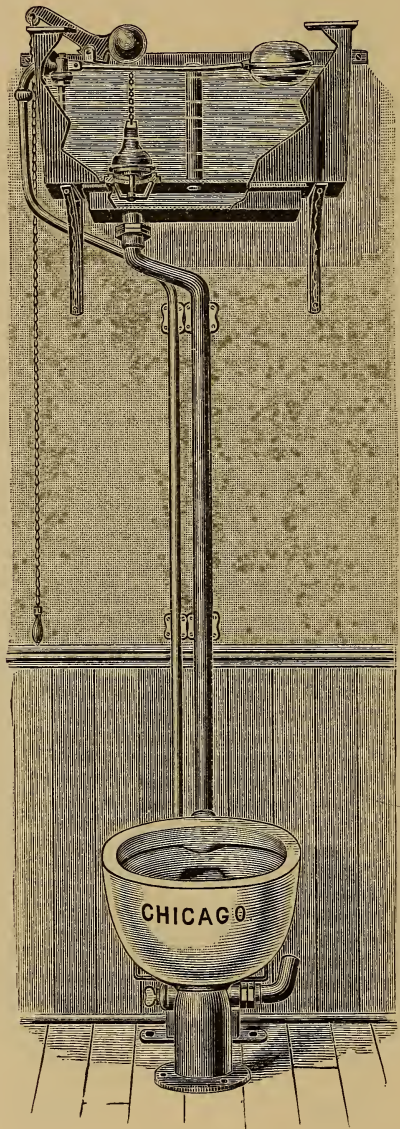


Fig. 569.

|                                                             |       |
|-------------------------------------------------------------|-------|
| Price, with Pull, Chain and Fig. 577 Iron Tank.....         | 22.50 |
| Price, with Pull, Chain and Fig. 581 Copper Lined Tank..... | 30.00 |

This Closet was made at the request of leading architects and plumbers to be used where a Washout Closet was wanted, but where the regular Earthen Closet would prove too expensive. It is a first-class closet in every respect, and is meeting with well merited success.

## CHICAGO WASHOUT CLOSET.

With Tank and Seat Complete.

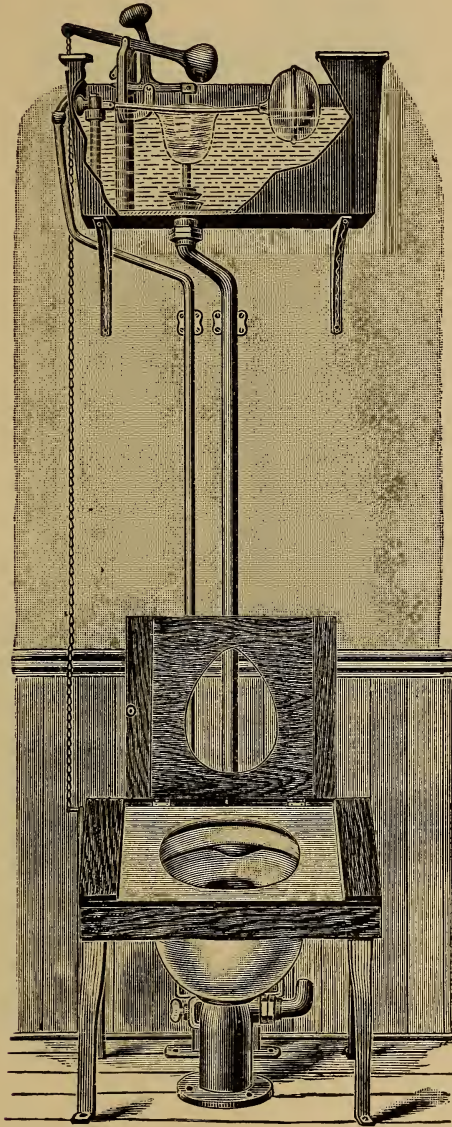


Fig. 570.

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|                                                                                        |       |
|----------------------------------------------------------------------------------------|-------|
| Price, with Iron Tank, Fig. 580, Seat and Galvanized Legs, complete, each.....         | 28.50 |
| Price, with Copper Lined Tank, Fig. 583, Seat and Galvanized Legs, complete, each..... | 31.50 |
| Deduct, if without Seat and Legs.....                                                  | 6.00  |
| Add, for Enameled Iron Drip Tray.....                                                  | 2.50  |

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## CLOW IMPROVED FLUSHING RIM HOPPER APPARATUS.

Long Oval Earthenware Hopper with Pull Attachment.

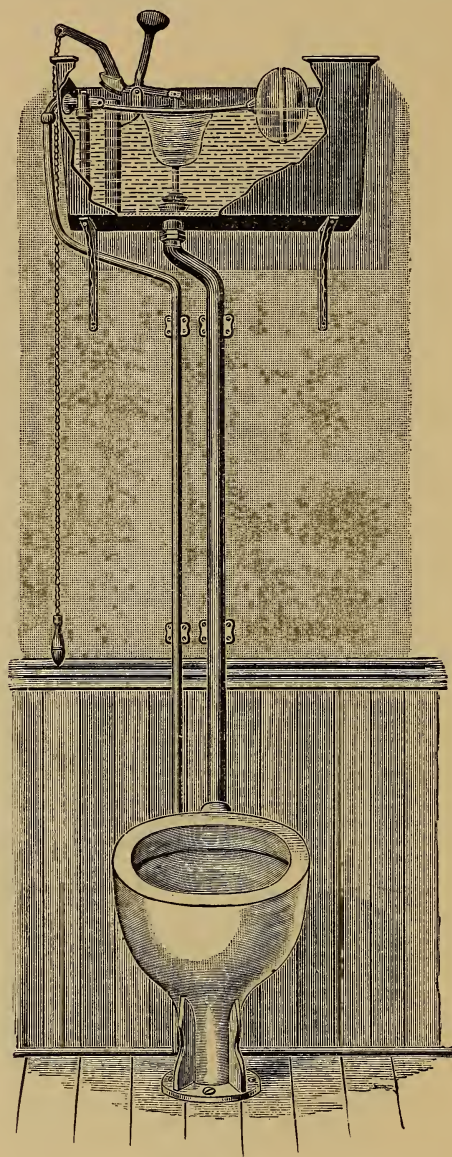


Fig. 571.

|                                                               |       |
|---------------------------------------------------------------|-------|
| Price, complete with Fig. 578 Iron Tank and Pull.....         | 22.00 |
| Price, complete with Fig. 581 Copper Lined Tank and Pull..... | 25.00 |
| Add, if with Seat and Galvanized Iron Legs.....               | 6.00  |
| Add, if with Enameled Drip Tray.....                          | 2.50  |
| Deduct, if with Enameled Iron Hopper, Fig. 544.....           | 3.50  |

This is an excellent apparatus for private residences or stores where a Hopper Closet is wanted, but where the complete Fore and After Wash Closet proves too expensive. Cost of this Closet can be reduced 4.50 by using Fig. 577 Iron Tank. For description of Tank see Fig. 578.

## CLOW IMPROVED FLUSHING RIM HOPPER APPARATUS.

Short Oval Earthenware Hopper and Trap with Pull Attachment.

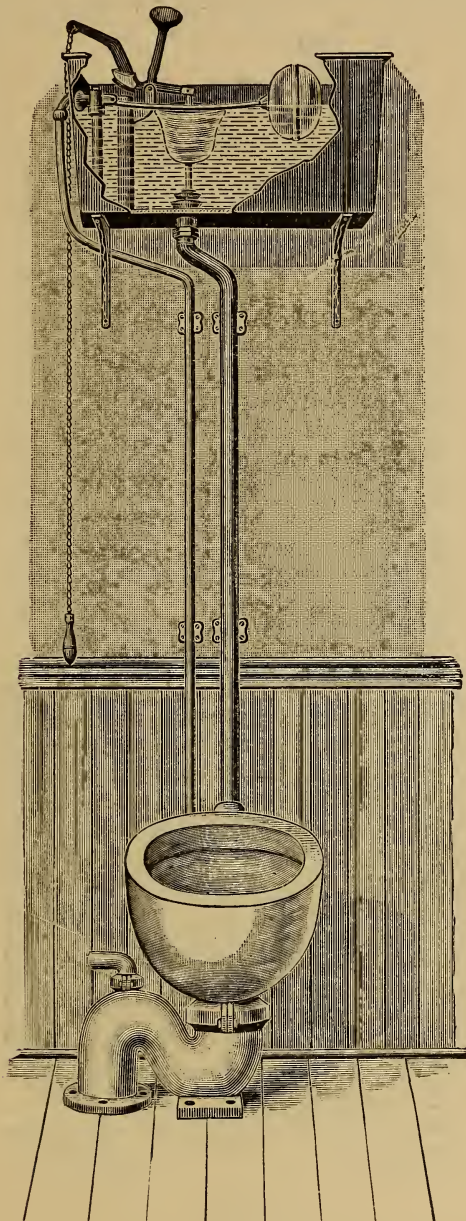


Fig. 572.

|                                                                       |       |
|-----------------------------------------------------------------------|-------|
| Price, Complete, with Fig. 578, Iron Tank and Pull, each.....         | 23.00 |
| Price, Complete, with Fig. 581, Copper Lined Tank and Pull, each..... | 26.00 |
| Add, if with Walnut or Cherry Seat and Galvanized Legs.....           | 6.00  |
| Add, if with Enameled Iron Drip Tray.....                             | 2.50  |
| Deduct, if with Enameled Iron Hopper, Fig. 545.....                   | 3.25  |

This apparatus is preferred by many persons in place of Fig. 571, as it has the advantage of having the Trap above the Floor.



## CLOW IMPROVED FLUSHING RIM HOPPER APPARATUS.

Long Oval Earthenware Hopper with Fore and After Wash Tank, Seat and Legs Complete.

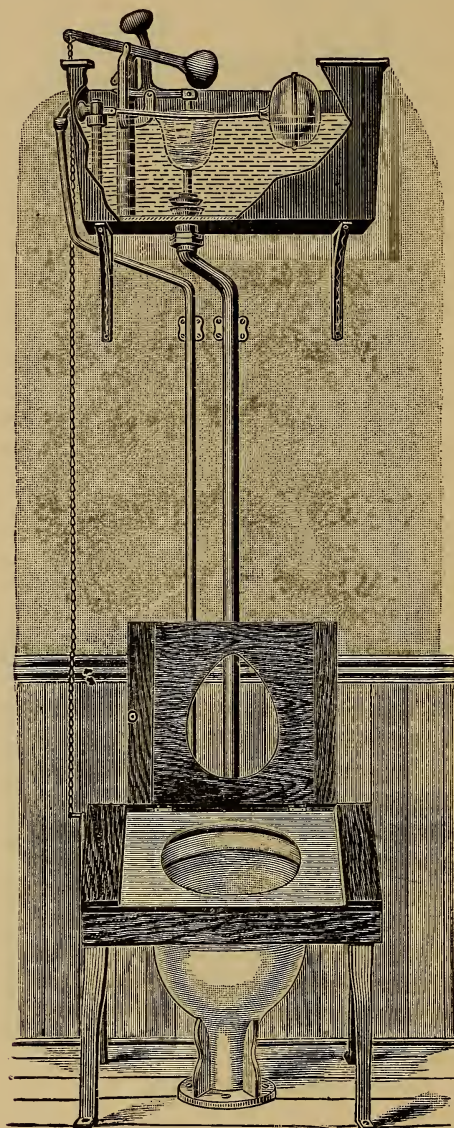


Fig. 573.

|                                                                                                                     |       |
|---------------------------------------------------------------------------------------------------------------------|-------|
| Price, complete with Fig. 579 Iron Fore and After Wash Tank, Walnut or Cherry Seat and Galvanized Legs.....         | 30.00 |
| Price, complete with Fig. 582 Copper Lined Fore and After Wash Tank, Walnut or Cherry Seat and Galvanized Legs..... | 33.00 |
| Deduct, if with Enameled Iron Hopper, Fig. 544.....                                                                 | 3.50  |
| Add, if with Enameled Drip Tray.....                                                                                | 2.50  |

For Public Buildings, Hotels, &c., this Closet has no superior. The Tank is without exception the very best now on the market. (See Fig. 579 for full description )

## CLOW IMPROVED FLUSHING RIM HOPPER APPARATUS.

## SHORT OVAL EARTHENWARE HOPPER AND TRAP.

With Fore and After Wash Tank, Seat and Legs Complete.

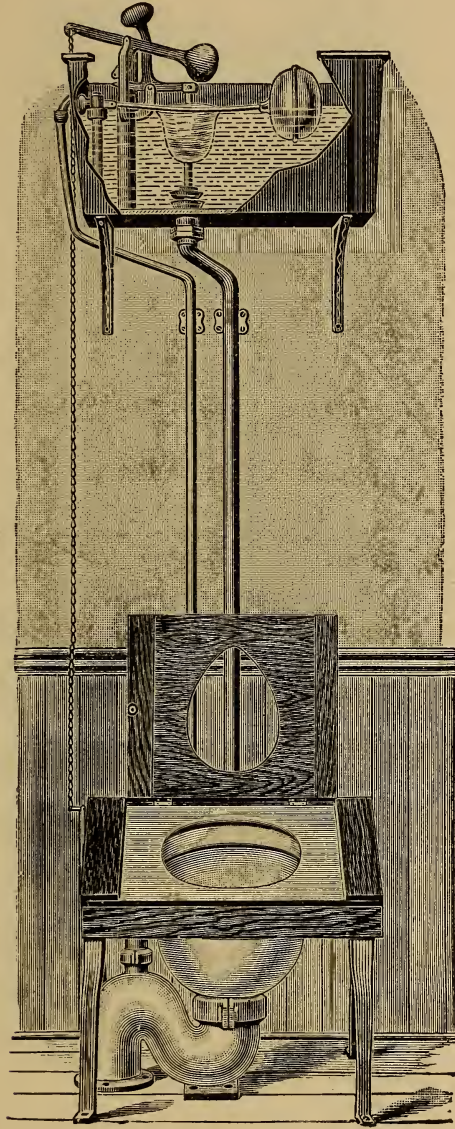


Fig. 574.

|                                                                                                                     |       |
|---------------------------------------------------------------------------------------------------------------------|-------|
| Price, complete with Fig. 579 Iron Fore and After Wash Tank, Walnut or Cherry Seat and Galvanized Legs.....         | 31.00 |
| Price, complete with Fig. 582 Copper Lined Fore and After Wash Tank, Walnut or Cherry Seat and Galvanized Legs..... | 34.00 |
| Deduct, if with Enameled Iron Hopper Fig. 545.....                                                                  | 3.25  |
| Add, if with Enameled Iron Drip Tray.....                                                                           | 2.50  |

This Apparatus is preferred by many persons in place of Fig. 573, as it has the advantage of having the Trap above the floor. For description of Tank see Fig. 579.



## CLOW IMPROVED FLUSHING RIM HOPPER APPARATUS.

Philadelphia Pattern Earthenware Hopper with Pull Attachment.

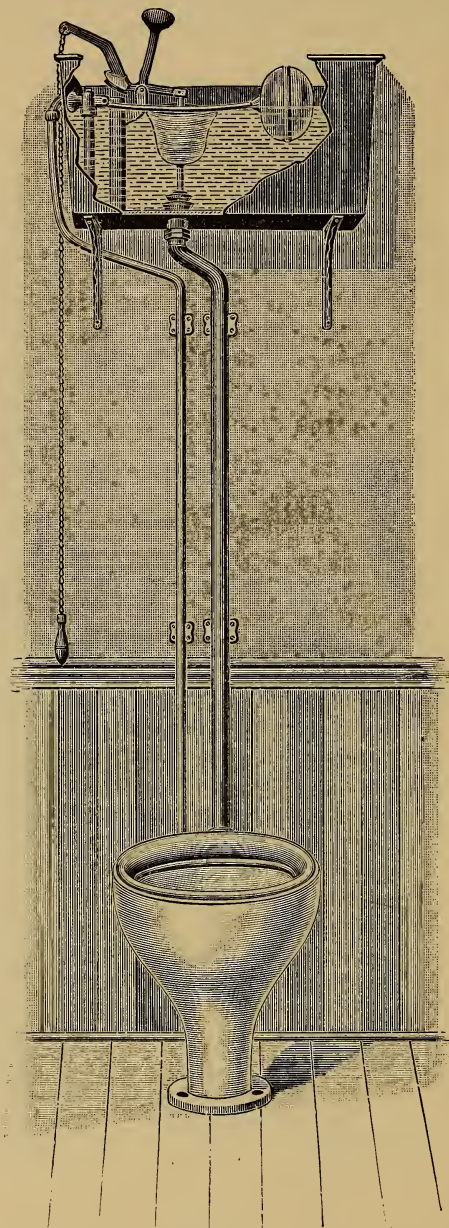


Fig. 575.

|                                                       |       |
|-------------------------------------------------------|-------|
| Price, complete with Fig. 578 Iron Tank and Pull..... | 18.00 |
| “ “ “ “ 577 “ “ “ “ .....                             | 13.50 |
| “ “ “ “ 581 Copper Lined Tank and Pull.....           | 21.00 |
| Add if with Enameled Iron Drip Tray.....              | 2.50  |

This Closet is specially designed for Servants' Apartments or where a good cheap Hopper Apparatus is desired. It will be found very effective.

## CLOW IMPROVED FLUSHING RIM HOPPER APPARATUS.

Philadelphia Pattern Earthenware Hopper with Fore and After Wash Tank, Seat and Legs Complete.

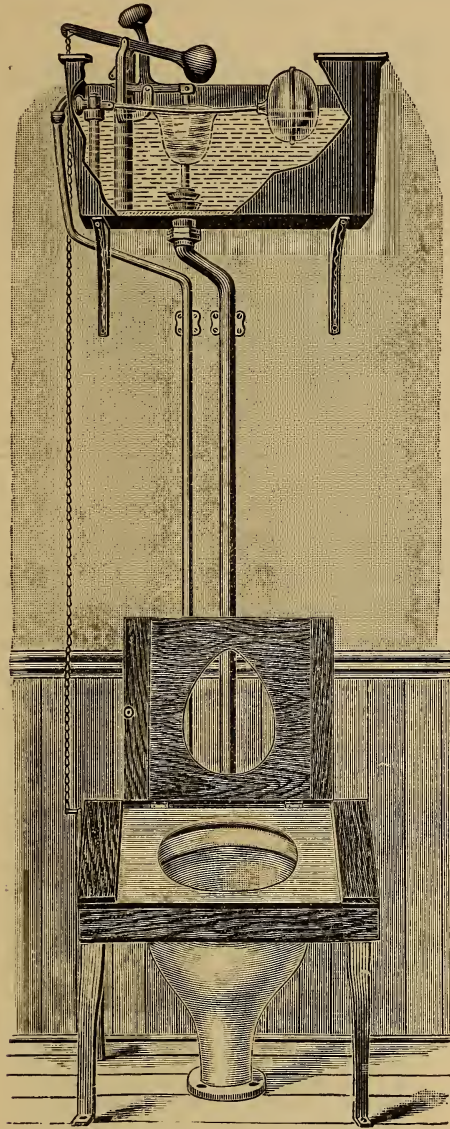


Fig. 576.

|                                                                                                                          |       |
|--------------------------------------------------------------------------------------------------------------------------|-------|
| Price, complete with Fig. 579 Iron Fore and After Wash Tank, Walnut or Cherry Seat and Galvanized Iron Legs .....        | 23.50 |
| Price, complete with Fig. 582 Copper Lined Fore and After Wash Tank, Walnut or Cherry Seat and Galvanized Iron Legs..... | 26.50 |
| Add, if with Enameled Iron Drip Tray.....                                                                                | 2.50  |

This Closet is specially designed for Servants' Apartments or where a good, cheap Hopper Apparatus is desired. It will be found very effective.

## CLOW IMPROVED CISTERNS.

Iron Pull Tank.

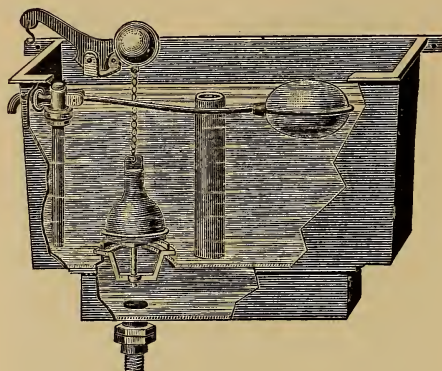


Fig. 577.

---

Price, Painted, each..... 7.50

---

This is a very excellent cheap Tank. The Float is Porcelain. Ball Cock will stand any pressure. The Tank is adapted to all kinds of Closets and Hoppers. The Valve has a 4 inch opening and the large Service Box fills so rapidly it insures a good wash. As a Cheap Tank for Washout Closets it has no equal.

## CLOW IMPROVED CISTERNS.

Iron Pull Tank.

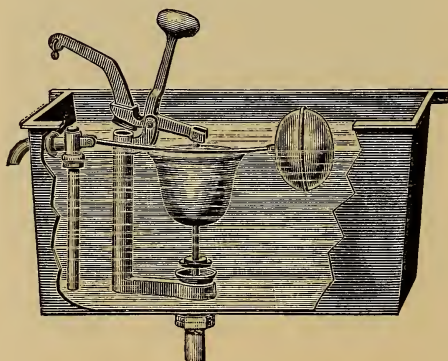


Fig. 578.

---

Price, Painted, each ..... 12.00

---

Without any single exception this is the very best Pull Tank now on the market. The Tank Valve is very simple in operation, and unlike other Tanks of this description it is noiseless in its operation, quite an advantage when used in residences. This Tank is particularly adapted to Hoppers and Wash-out Closets. After regulating the amount of water wanted, the same flush is obtained every time Tank is used. There is no waste or small wash so annoying in many Tanks.



## CLOW IMPROVED CISTERNS.

Fore and After Wash Iron Tank.

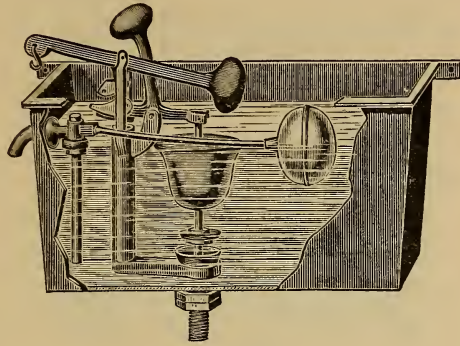


Fig. 579.

---

Price, Painted, each..... 15.00

---

This Tank will be found simple but very effective. It has the same noiseless principles as in Fig. 578. The Fore Wash is about two quarts, the After Wash between two and three gallons. This Tank is adapted particularly to Hoppers. When once regulated as in Fig. 578 the same wash is always obtained.

## CLOW IMPROVED CISTERNS.

After Wash Iron Tank.

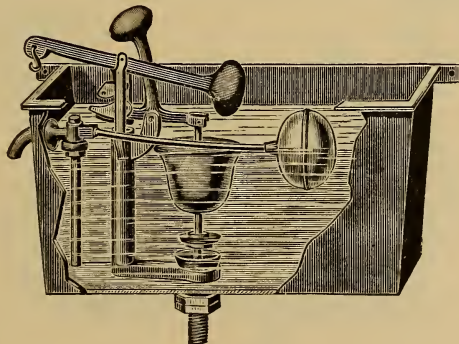


Fig. 580.

---

Price, Painted, each..... 14.00

---

This has the same general features as Fig. 579, but is After Wash only, and is best adapted to Washout Closets when used with seats. It has the same noiseless principles as Fig. 578.



CLOW IMPROVED CISTERNS.

Copper Lined Pull Tank.

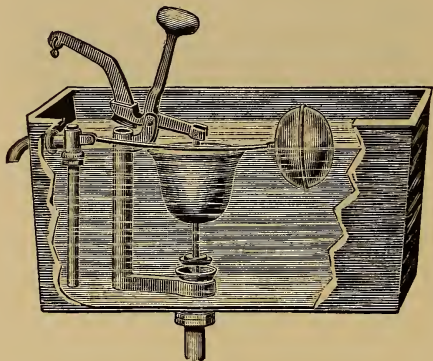


Fig. 581.

---

|                  |       |
|------------------|-------|
| Price, each..... | 15.00 |
|------------------|-------|

---

This Tank is similar in action to Fig. 578. All of our Copper Lined Tanks are lined with 16 oz. Copper, and are thoroughly first-class in every respect.

CLOW IMPROVED CISTERNS.

Copper Lined Fore and After Wash Tank.

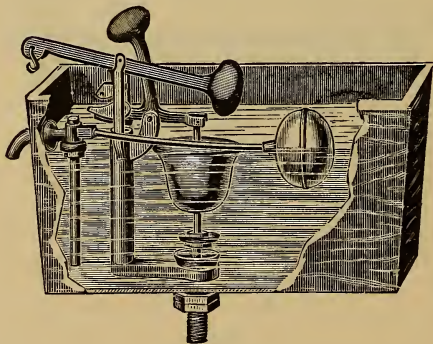


Fig. 582.

---

|                  |       |
|------------------|-------|
| Price, each..... | 18.00 |
|------------------|-------|

---

This Tank is similar in action to Fig. 579.

## CLOW IMPROVED CISTERNS.

Copper Lined After Wash Tank.

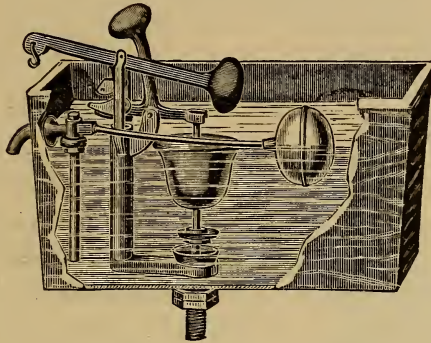


Fig. 583.

|                  |       |
|------------------|-------|
| Price, each..... | 17.00 |
|------------------|-------|

The Tank is similar in action to Fig. 580.

## CISTERN TANK VALVES.

For Pull Tank.

For Fore and After Wash Tank.

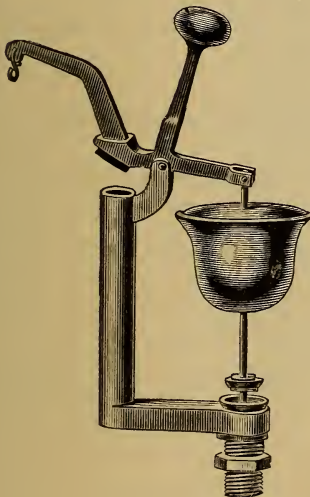


Fig. 584.

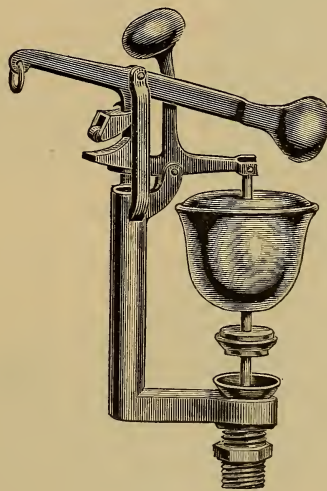


Fig. 585.

|                                                          |      |
|----------------------------------------------------------|------|
| Price, Fig. 584, each....                                | 5.00 |
| Price, Fig. 585, Fore and After Wash, each.....          | 8.00 |
| Price, Fig. 586 (Not illustrated), After Wash, each..... | 7.00 |

As many Plumbers prefer to make their own Tanks, we furnish our Tank, Valves for Wood Tanks, as Illustrated above, and offer them to the trade as the best Tank Valve now on the market.

HEAP'S PATENT EARTH CLOSETS AND COMMODES.

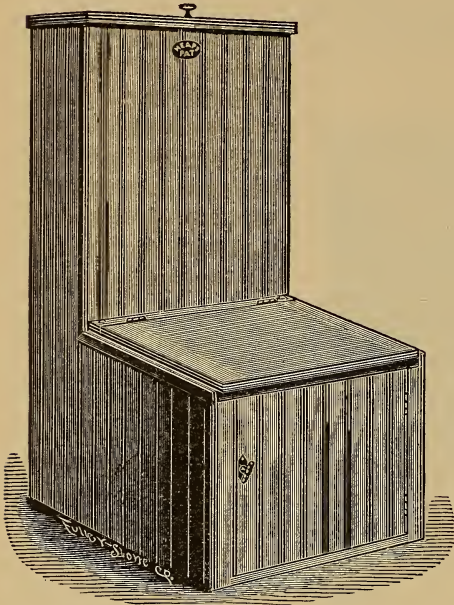


Fig. 587.

EARTH CLOSET.

Size, 48 inches high, 24 inches wide and 29 inches deep.

|                                           |       |
|-------------------------------------------|-------|
| Price, Plain Soft Wood, in the White..... | 15.00 |
| Price, Soft Wood, Finished.....           | 18.00 |
| Price, Ash, Finished.....                 | 25.00 |
| Price, Red Oak, Finished.....             | 25.00 |
| Price, Antique, Finished.....             | 27.50 |

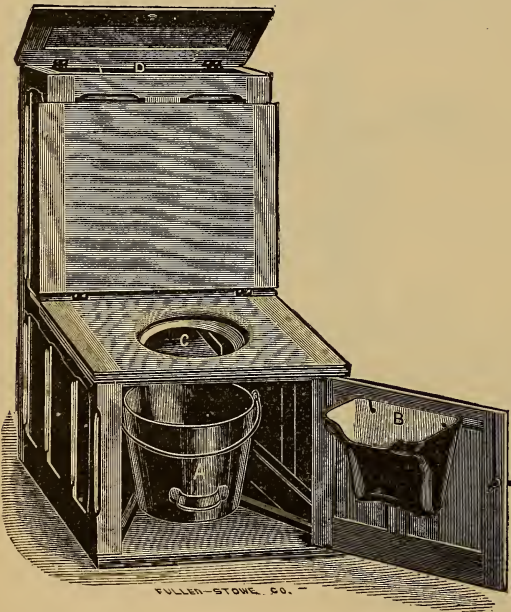


Fig. 588.

BEDROOM COMMODES.

Size, 42 inches high, 23 inches wide and 29 inches deep.

|                                 |       |
|---------------------------------|-------|
| Price, Black Ash, Panelled..... | 30.00 |
| Price, Red Oak, Panelled.....   | 30.00 |
| Price, Antique, Panelled.....   | 32.50 |

The most perfect Dry Earth Closet made. Over 20,000 in use. Awarded 16 First-Prize medals.

The want of proper drainage or water-works often prevents the use of Water Closets in the house. These DRY CLOSETS *can be placed anywhere* INSIDE THE HOUSE, or the apparatus can be built in, and thus all the convenience and comfort obtainable from the best Water Closet is satisfactorily secured.



ENAMELED IRON DRIP TRAY.

Round.

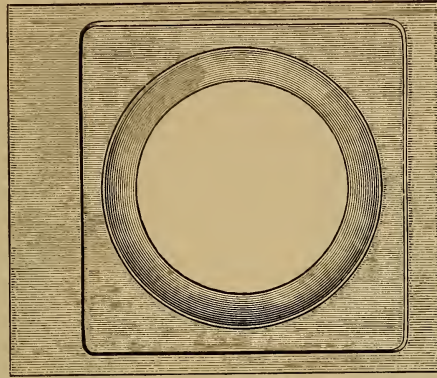


Fig. 589.

Price, each..... 2.50

ENAMELED IRON DRIP TRAY.

Oval.

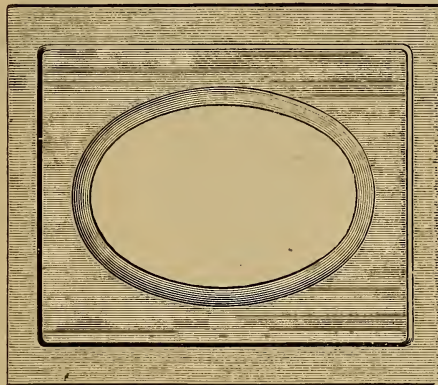


Fig. 590

Price, each..... 2.50

EARTHENWARE DRIP TRAY.

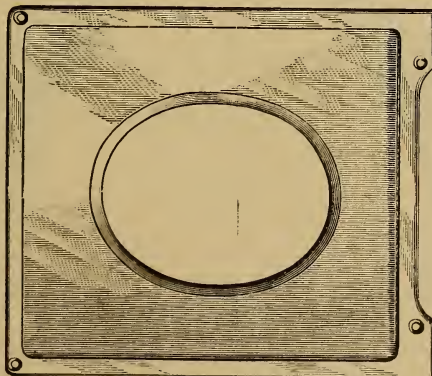


Fig. 591.

Price, each..... 3.50



## EARTHENWARE.

Clow Flushing Rim Long Oval  
Earthenware Hopper.



Fig. 592.

Price, each ..... 9.00

Clow Flushing Rim Short Oval Earthen-  
ware Hopper, with Earthenware  
Trap.

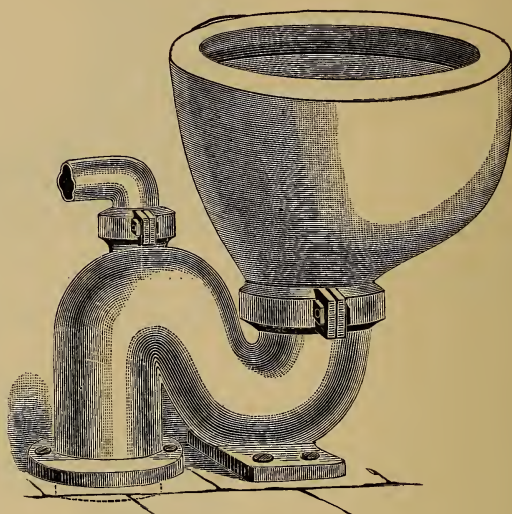


Fig. 593.

Price, each ..... 10.00

Hopper, Philadelphia Pattern.  
Earthenware.

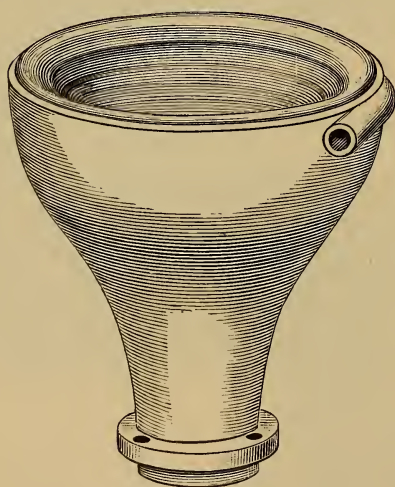


Fig. 594.

Price, each ..... 3.25

Flushing Rim Earthenware Hopper.  
Philadelphia Pattern.



Fig. 595.

Price, each ..... 7.50

## URINALS.

## CORNER URINAL.

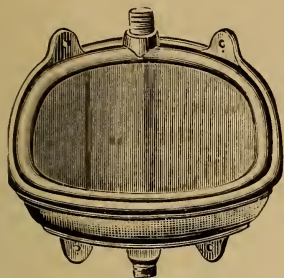


Fig. 596.

## FLAT URINAL.

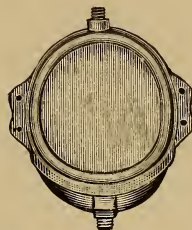


Fig. 597.

|                   | Large.  | Small.                              |                   | Large.  | Small.                |
|-------------------|---------|-------------------------------------|-------------------|---------|-----------------------|
| Size, inches..... | 12 x 12 | 10 $\frac{1}{4}$ x 10 $\frac{1}{4}$ | Size, inches..... | 15 x 18 | 11 $\frac{1}{2}$ x 14 |
| Price, each.....  | 6.90    | 4.85                                | Price, each. .... | 6.90    | 4.85                  |

## LIPPED URINALS.

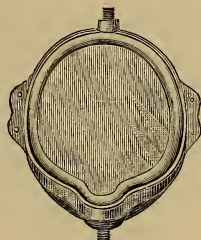


Fig. 598.

|                          | Large.  | Small.  | Not Illustrated.         | Large.  | Small.  |
|--------------------------|---------|---------|--------------------------|---------|---------|
| Size, Flat, Fig. 598.... | 15 x 18 | 12 x 15 | Size, Corner, Fig. 599.. | 12 x 12 | 11 x 11 |
| Price, each....          | 8.50    | 6.90    | Price, each. ....        | 8.50    | 6.90    |

## VENTILATED URINAL

With Hood and Lip.

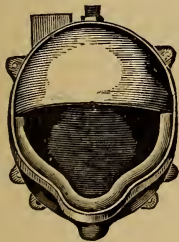


Fig. 600.

## CAR URINAL.



Fig. 601.

|                         | Large.  | Small.  |                      |
|-------------------------|---------|---------|----------------------|
| Size, Flat Back, inches | 15 x 18 | 12 x 15 | Price, each.... 4.10 |
| Price, each.....        | 8.50    | 7.50    |                      |

COMMON OVERFLOW WASH BASIN.

For Metal Plug.

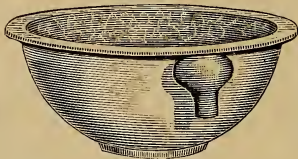


Fig. 602.

|                                |      |      |      |      |      |
|--------------------------------|------|------|------|------|------|
| Diameter, outside, inches..... | 12   | 13   | 14   | 15   | 16   |
| Price, each .....              | 1.05 | 1.25 | 1.40 | 1.90 | 2.40 |

PATENT OVERFLOW WASH BASIN.

For Metal Plug.



Fig. 603.

|                                |      |      |      |      |      |
|--------------------------------|------|------|------|------|------|
| Diameter, outside, inches..... | 12   | 13   | 14   | 15   | 16   |
| Price, each .....              | 1.15 | 1.30 | 1.50 | 2.10 | 2.70 |

PATENT OVERFLOW WASH BASIN.

For Rubber Plug.

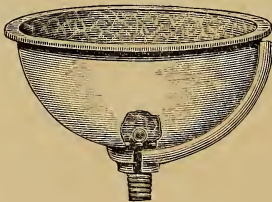


Fig. 604.

|                               |      |      |      |      |      |
|-------------------------------|------|------|------|------|------|
| Diameter, outside, inches.... | 12   | 13   | 14   | 15   | 16   |
| Price, each.....              | 1.40 | 1.55 | 1.70 | 2.30 | 3.00 |

We carry a large stock of Decorated Basins both Round and Oval, varying in prices from \$3.00 to \$13.00.



OVAL WASH BASIN.

For Metal Plug.



Fig. 605.

|                                |         |
|--------------------------------|---------|
| Diameter, outside, inches..... | 15 x 19 |
| Price, each.....               | 5.00    |

WASH BASIN WITHOUT OVERFLOW.

For Metal Plug.

Fig. 606. (Not illustrated.)

|                                |     |      |      |      |      |
|--------------------------------|-----|------|------|------|------|
| Diameter, outside, inches..... | 12  | 13   | 14   | 15   | 16   |
| Price, each .....              | .80 | 1.00 | 1.15 | 1.60 | 2.00 |

ROUND CLOSET BOWL.



Fig. 607.

|                  |      |
|------------------|------|
| Price, each..... | 1.45 |
|------------------|------|

SLAB AND BASIN COMBINED.

Square or Flat Back.

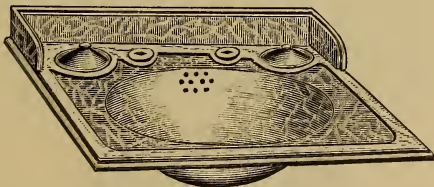


Fig. 608.

|                                        |         |         |
|----------------------------------------|---------|---------|
| Size of Slab, inches.....              | 18 x 18 | 14 x 14 |
| Inside Diameter of Basin, inches ..... | 11      | 11      |
| Price, each.....                       | 9.25    | 6.50    |



SLAB AND BASIN COMBINED.

Corner.

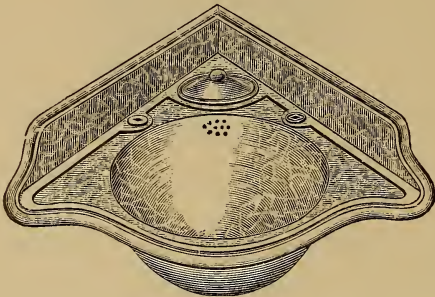


Fig. 609.

|                                       |         |         |
|---------------------------------------|---------|---------|
| Size of Slab, inches.....             | 19 x 19 | 14 x 14 |
| Inside Diameter of Basin, inches..... | 11      | 11      |
| Price, each.....                      | 9.25    | 6.50    |

SOAP DISH.

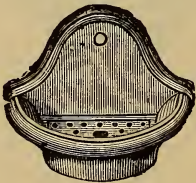


Fig. 610.

|                  |     |
|------------------|-----|
| Price, each..... | .75 |
|------------------|-----|

COCK HOLE PLUG.

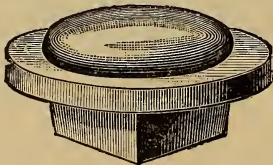


Fig. 611.

|                  |     |
|------------------|-----|
| Price, each..... | .15 |
|------------------|-----|

## WHITE CROCKERY WASH TRAY.

CERAMIC.

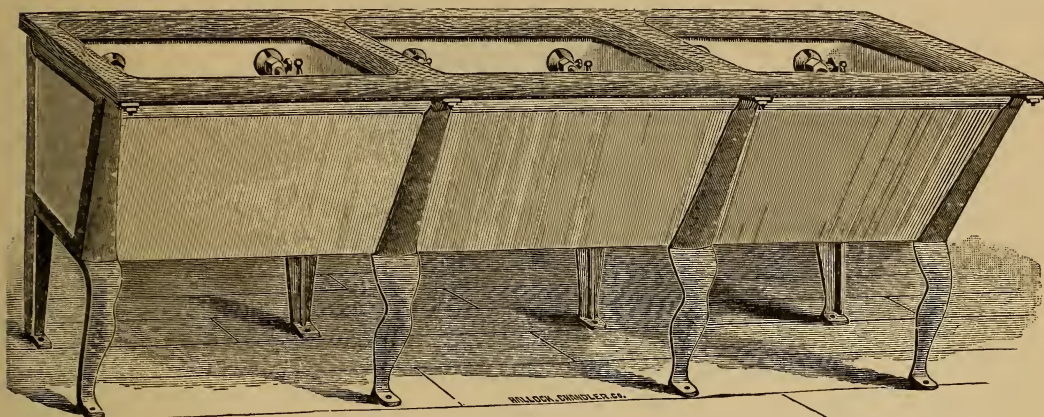


Fig. 612.

## PRICE LIST OF WASH TRAYS AND FIXTURES.

|                                                                            |        |                                             |       |
|----------------------------------------------------------------------------|--------|---------------------------------------------|-------|
| One Tub, without Stand or Top.....                                         | 20.00  | Galvanized Iron Stands for set of 2 tubs... | 8.25  |
| Two Tubs, with galvanized iron stands and ash top, bolts and screws .....  | 51.00  | “ “ “ “ 3 “ .....                           | 11.00 |
| Three Tubs, with galvanized iron stands and ash top, bolts and screws..... | 75.00  | “ “ “ “ 4 “ .....                           | 13.75 |
| Four Tubs, with galvanized iron stands and ash top, bolts and screws... .. | 99.00  | “ “ “ “ 5 “ .....                           | 16.50 |
| Five Tubs, with galvanized iron stands and ash top, bolts and screws ..... | 125.00 | Wood Top for set of 2 tubs.....             | 2.75  |
|                                                                            |        | “ “ “ “ 3 “ .....                           | 4.00  |
|                                                                            |        | “ “ “ “ 4 “ .....                           | 5.25  |
|                                                                            |        | “ “ “ “ 5 “ .....                           | 6.50  |

## WHITE CROCKERY SINK.

Made of Same Material as the Tubs. Possessing Strength, Durability, Smoothness of Surface. No Labor Required to Keep Clean.

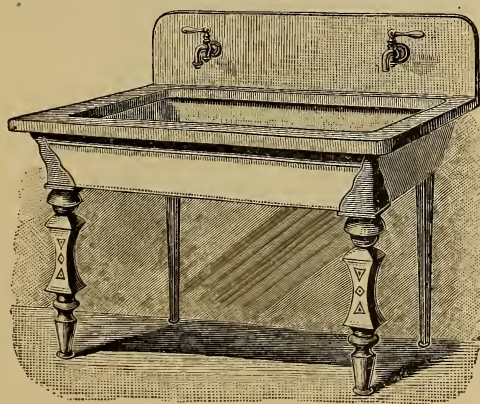


Fig. 613.

The above cut shows a Kitchen Sink set up on Galvanized Iron Legs, with a heavy, well-seasoned Ash Top firmly secured.

This plan will recommend itself as being Strong, Durable and Cleanly in appearance. Sizes as follows are outside measurements.

|                                   |       |                                                          |       |
|-----------------------------------|-------|----------------------------------------------------------|-------|
| Butler's Pantry, 24 x 18 x 8..... | 8.00  | Kitchen, 42 x 22 x 7½.....                               | 20.00 |
| “ “ 30 x 18 x 11.....             | 14.00 | Slop, 19 x 19 x 15.....                                  | 14.00 |
| Kitchen, 30 x 20 x 7 .....        | 12.00 | Galvanized Iron Stand and Ash Top for kitchen sinks..... | 8.00  |
| “ 30 x 22 x 7 .....               | 12.00 | Galvanized Iron Brackets, per pair.....                  | 2.00  |
| “ 37 x 22 x 7½ .....              | 16.00 |                                                          |       |

SOAPSTONE AND SLATE WASH TUBS.



Fig. 614.

All measurements are outside.

|                             |             |        |
|-----------------------------|-------------|--------|
| Number Parts.....           | 2           | 3      |
| Length.....                 | 4 ft. 6 in. | 6 ft.  |
| Width.....                  | 2 ft.       | 2 ft.  |
| Depth.....                  | 16 in.      | 16 in. |
| Price, Soapstone, each..... | 26.50       | 36.00  |
| Price, Slate, each....      | 20.00       | 27.00  |

Soap Cup and Backs extra, and are never sent unless specially ordered.

|                                                            |      |
|------------------------------------------------------------|------|
| Add for Galvanized Legs for Two-Part Wash Tray, Net.....   | 4.50 |
| Add for Galvanized Legs for Three-Part Wash Tray, Net..... | 6.00 |

SOAPSTONE AND SLATE SINKS.

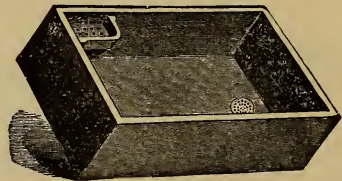


Fig. 615.

|                             |        |        |             |        |
|-----------------------------|--------|--------|-------------|--------|
| Length.....                 | 2 ft.  | 3 ft.  | 3 ft. 6 in. | 4 ft.  |
| Width.....                  | 18 in. | 20 in. | 22 in.      | 24 in. |
| Depth.....                  | 7 in.  | 7 in.  | 7 in.       | 7 in.  |
| Price, Soapstone, each..... | 8.50   | 10.50  | 11.50       | 14.50  |
| Price, Slate, each.....     | 5.50   | 7.00   | 7.50        | 9.50   |

Soap Cups, extra 50 cents.



MARBLE.

CORNER SLAB.

With Two Backs.

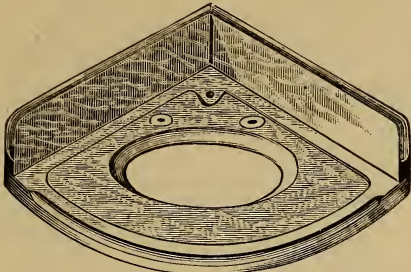


Fig. 616.

|                                             |              |             |             |             |             |              |
|---------------------------------------------|--------------|-------------|-------------|-------------|-------------|--------------|
| Size of Slab, inches.....                   | 18           | 19          | 20          | 21          | 22          | 24           |
| No. of Feet in Slab with 8 inch Backs.....  | 4 ft. 10 in. | 5 ft. 3 in. | 5 ft. 9 in. | 6 ft. 3 in. | 6 ft. 6 in. | 7 ft. 6 in.  |
| No. of Feet in Slab with 10 inch Backs..... | 6 ft. 3 in.  | 6 ft. 9 in. | 7 ft. 2 in. | 7 ft. 7 in. | 8 ft. 1 in. | 9 ft.        |
| No. of Feet in Slab with 12 inch Backs..... | 7 ft. 2 in.  | 7 ft. 7 in. | 8 ft. 1 in. | 8 ft. 7 in. | 9 ft.       | 10 ft. 1 in. |

SQUARE SLAB.

With Single Back.

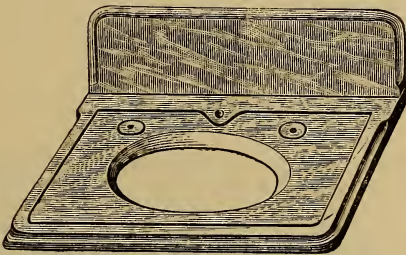


Fig. 617.

|                                            |             |             |              |             |
|--------------------------------------------|-------------|-------------|--------------|-------------|
| Size of Slab, inches.....                  | 19 x 24     | 19 x 26     | 20 x 24      | 20 x 26     |
| No. of Feet in Slab with 8 inch Back.....  | 5 ft. 3 in. | 5 ft. 8 in. | 5 ft. 6 in.  | 6 ft.       |
| No. of Feet in Slab with 10 inch Back..... | 5 ft. 7 in. | 6 ft. 1 in. | 5 ft. 11 in. | 6 ft. 3 in. |
| No. of Feet in Slab with 12 inch Back..... | 6 ft.       | 6 ft. 5 in. | 6 ft. 2 in.  | 6 ft. 8 in. |
| Size of Slab, inches... ..                 | 20 x 28     | 20 x 30     | 22 x 30      | 22 x 36     |
| No. of Feet in Slab with 8 inch Back.....  | 6 ft. 4 in. | 6 ft. 8 in. | 7 ft. 1 in.  | 8 ft. 6 in. |
| No. of Feet in Slab with 10 inch Back..... | 6 ft. 8 in. | 7 ft. 2 in. | 7 ft. 7 in.  | 9 ft.       |
| No. of Feet in Slab with 12 inch Back..... | 7 ft. 1 in. | 7 ft. 7 in. | 8 ft.        | 9 ft. 6 in. |

All Slabs are shipped with 8 inch Backs unless otherwise ordered.

We carry every size named in our list in stock cut for two cock holes. When wanted for one cock hole the same slab can be used by putting in either a Chain Stay, Fig. 409, or Cock Hole Plug, Figs. 415 to 609. All Slabs cut for 14 inch Basins unless otherwise ordered. Slabs without Backs cost more per foot than when furnished with Backs. Slabs for Oval Basins or Combination Cocks should be either 22 or 24 inches wide.



SQUARE SLAB.

With Back and Right Hand End.

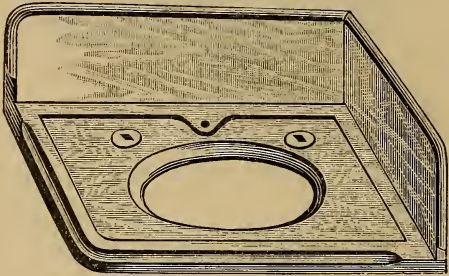


Fig. 618.

|                                             |              |              |             |             |             |
|---------------------------------------------|--------------|--------------|-------------|-------------|-------------|
| Size of Slab, inches .....                  | 19 x 24      | 20 x 24      | 20 x 26     | 20 x 28     | 20 x 30     |
| No. of Feet in Slab with 8 inch Backs.....  | 6 ft. 4 in.  | 6 ft. 7 in.  | 7 ft.       | 7 ft. 6 in. | 7 ft. 9 in. |
| No. of Feet in Slab with 10 inch Backs..... | 6 ft. 11 in. | 7 ft. 2 in.  | 7 ft. 7 in. | 8 ft. 1 in. | 8 ft. 6 in. |
| No. of Feet in Slab with 12 inch Backs..... | 7 ft. 6 in.  | 7 ft. 10 in. | 8 ft. 4 in. | 8 ft. 9 in. | 9 ft. 2 in. |

SQUARE SLAB.

With Back and Left Hand End.

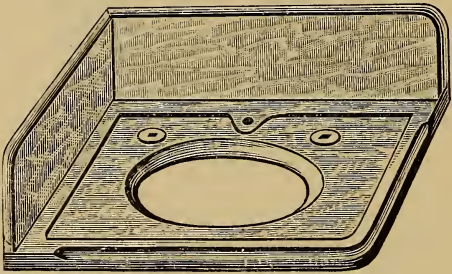


Fig. 619.

|                                              |              |              |             |             |             |
|----------------------------------------------|--------------|--------------|-------------|-------------|-------------|
| Size of Slab, inches .....                   | 19 x 24      | 20 x 24      | 20 x 26     | 20 x 28     | 20 x 30     |
| No. of Feet in Slab with 8 inch Backs.....   | 6 ft. 4 in.  | 6 ft. 7 in.  | 7 ft.       | 7 ft. 6 in. | 7 ft. 9 in. |
| No. of Feet in Slab with 10 inch Backs ..... | 6 ft. 11 in. | 7 ft. 2 in.  | 7 ft. 7 in. | 8 ft. 1 in. | 8 ft. 6 in. |
| No. of Feet in Slab with 12 inch Backs ..... | 7 ft. 6 in.  | 7 ft. 10 in. | 8 ft. 4 in. | 8 ft. 9 in. | 9 ft. 2 in. |

## RECESS SLAB, WITH BACK AND TWO ENDS.

With Nosing.

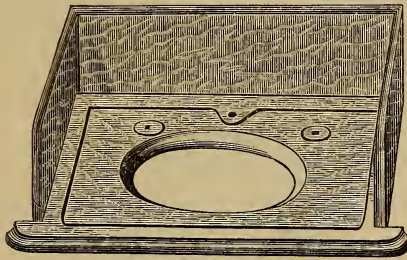


Fig. 620.

When Recess Slabs are made, like Fig. 618, they are measured to extreme ends and one inch for the edge. In ordering Recess Slabs care should be taken to have measurements very exact.

## RECESS SLAB, WITH BACK AND TWO ENDS.

Without Nosing.

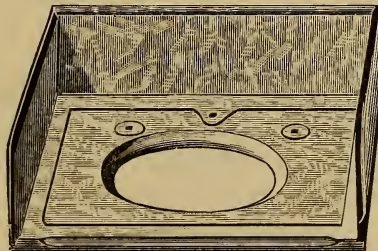


Fig. 621.

This Slab finishes flush with the wall. Recess Slabs vary so in size that a table of measurements would be of no benefit.

BARBER'S SLAB.

For Two Basins.

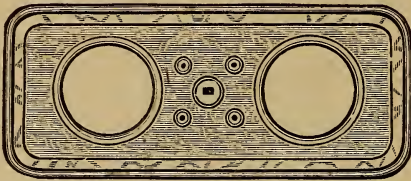


Fig. 622.

|                             |         |         |             |
|-----------------------------|---------|---------|-------------|
| Sizes.....                  | 44 x 20 | 46 x 22 | 48 x 22     |
| Number of feet in Slab..... | 7 ft.   | 8 ft.   | 8 ft. 4 in. |

BARBER'S SLAB.

For Three Basins.

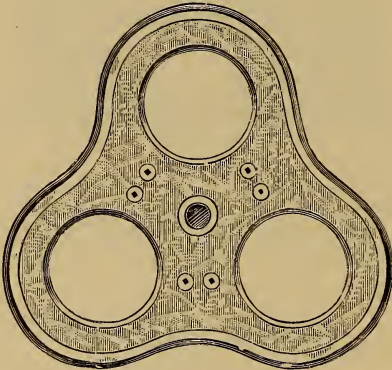


Fig. 623.

|                               |              |              |              |
|-------------------------------|--------------|--------------|--------------|
| Size, across widest part..... | 3 ft. 6 in.  | 3 ft. 8 in.  | 3 ft. 10 in. |
| Number of feet in Slab.....   | 13 ft. 5 in. | 14 ft. 8 in. | 16 ft.       |

BARBER'S SLAB.

For Three Basins.

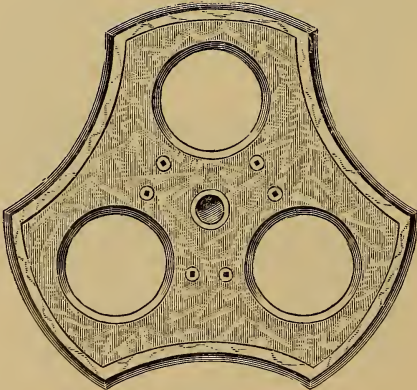


Fig. 624.

|                               |              |              |              |
|-------------------------------|--------------|--------------|--------------|
| Size, across widest part..... | 3 ft. 6 in.  | 3 ft. 8 in.  | 3 ft. 10 in. |
| Number of feet in Slab...     | 13 ft. 5 in. | 14 ft. 8 in. | 16 ft.       |



BARBER'S SLABS.

For Four Basins.

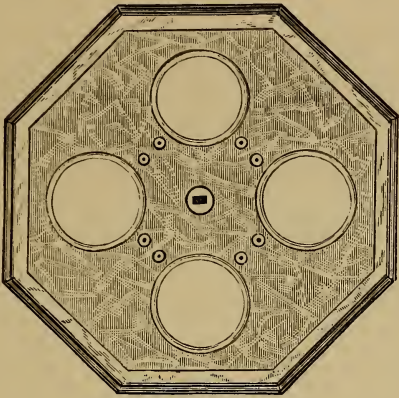


Fig. 625.

|                               |              |              |              |
|-------------------------------|--------------|--------------|--------------|
| Size, across widest part..... | 3 ft. 10 in. | 4 ft.        | 4 ft. 2 in.  |
| Number of feet in Slab.....   | 16 ft.       | 17 ft. 4 in. | 18 ft. 9 in. |



Fig. 626.

|                               |              |              |              |
|-------------------------------|--------------|--------------|--------------|
| Size, across widest part..... | 3 ft. 10 in. | 4 ft.        | 4 ft. 2 in.  |
| Number of feet in Slab.....   | 16 ft.       | 17 ft. 4 in. | 18 ft. 9 in. |

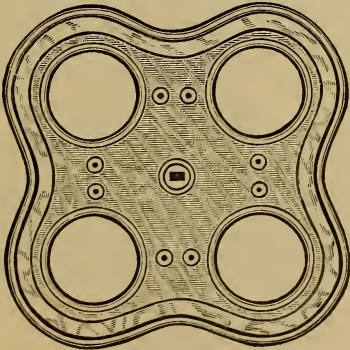


Fig. 627.

|                               |              |              |              |
|-------------------------------|--------------|--------------|--------------|
| Size, across widest part..... | 3 ft. 10 in. | 4 ft.        | 4 ft. 2 in.  |
| Number of feet in Slab.....   | 16 ft.       | 17 ft. 4 in. | 18 ft. 9 in. |

Other sizes or designs will be made to order.

### RADIATOR TOP.

Oblong.

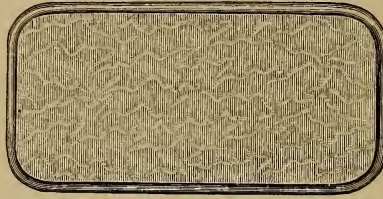


Fig. 628.

Corners rounded to  $2\frac{1}{2}$  inch radius, (5 inch circle). In measuring allow about  $\frac{3}{4}$  inch projection all around.

### RADIATOR TOP.

Round.

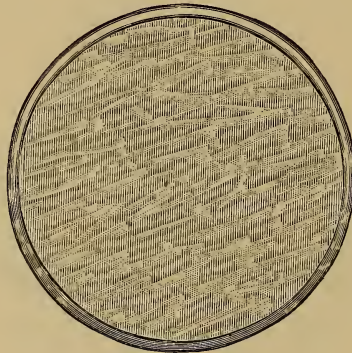


Fig. 629.

In measuring allow about  $\frac{3}{4}$  inch projection all around. We strongly recommend the use of Pink Knoxville or No. 2 Tennessee Marble for Radiator Tops. It presents a very handsome appearance and does not stain. They also make good Radiator Bottoms.

### DRINKING SLAB.

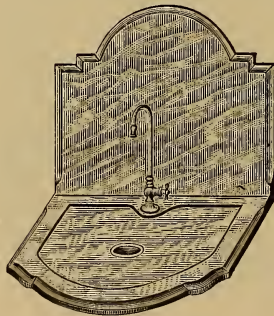


Fig. 630.

We make to order any style Drinking Slab wanted. In ordering, if possible, always send diagram, and give full directions how slab is to be cut.



## URINAL STALLS.

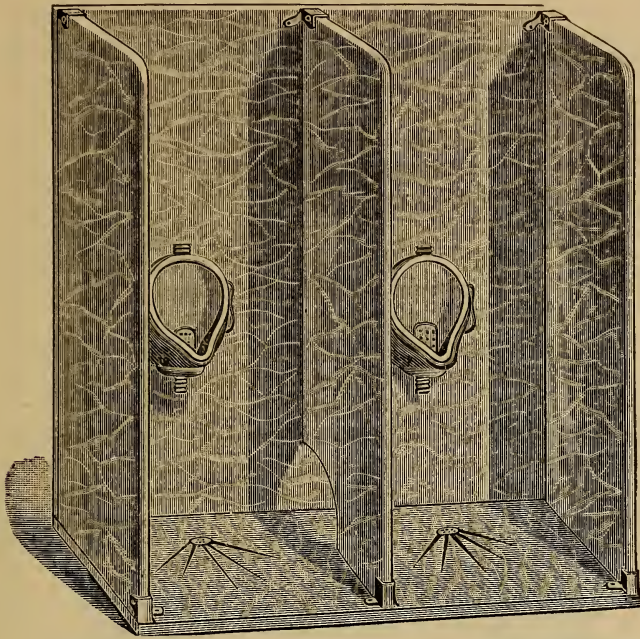


Fig. 631.

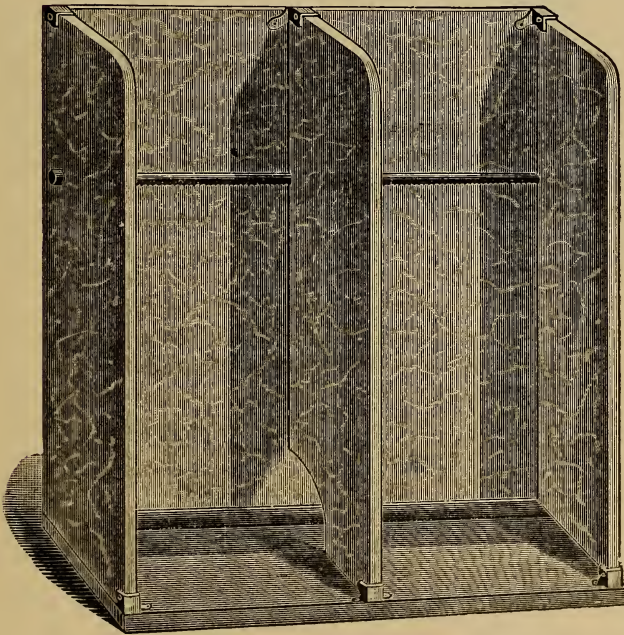


Fig. 632.

We make Urinal Stalls of all descriptions, using the Foster Patent Fastenings. In ordering, it is always best to send drawing and full specifications of just what is wanted. The figures above are the style generally used.

We also make Urinal Stalls of slate and marble, with glass back when wanted. Estimates furnished on any specification.

GALVANIZED IRON RANGE BOILERS.



Fig. 633.

| Capacity.         | Size.          | Price. |
|-------------------|----------------|--------|
| * 18 gallons..... | 3 ft. x 12 in. | 14.05  |
| * 21 ".....       | 3½ " x 12 "    | 14.85  |
| * 24 ".....       | 4 " x 12 "     | 15.75  |
| 27 ".....         | 4½ " x 12 "    | 17.50  |
| * 30 ".....       | 5 " x 12 "     | 19.00  |
| * 35 ".....       | 5 " x 13 "     | 20.75  |
| 36 ".....         | 6 " x 12 "     | 24.35  |
| 24 ".....         | 3 " x 14 "     | 19.00  |
| 28 ".....         | 3½ " x 14 "    | 19.80  |
| 32 ".....         | 4 " x 14 "     | 20.75  |
| 36 ".....         | 4½ " x 14 "    | 21.50  |
| * 40 ".....       | 5 " x 14 "     | 24.00  |
| 48 ".....         | 6 " x 14 "     | 29.75  |
| 42 ".....         | 4 " x 16 "     | 25.75  |
| 47 ".....         | 4½ " x 16 "    | 28.75  |
| * 52 ".....       | 5 " x 16 "     | 30.60  |
| * 63 ".....       | 6 " x 16 "     | 38.00  |
| 53 ".....         | 4 " x 18 "     | 31.50  |
| * 66 ".....       | 5 " x 18 "     | 36.00  |
| 79 ".....         | 6 " x 18 "     | 44.00  |
| * 82 ".....       | 5 " x 20 "     | 45.50  |
| 98 ".....         | 6 " x 20 "     | 54.00  |
| *100 ".....       | 5 " x 22 "     | 54.00  |
| 120 ".....        | 6 " x 22 "     | 63.00  |
| *120 ".....       | 5 " x 24 "     | 61.50  |
| 144 ".....        | 6 " x 24 "     | 70.00  |
| 168 ".....        | 7 " x 24 "     | 84.00  |
| 192 ".....        | 8 " x 24 "     | 95.00  |

All Boilers are Tested and Warranted. Prices are for Boilers only. Stands, Tube and Couplings are extra.  
Sizes marked with a \* are always in stock; other sizes made to order.

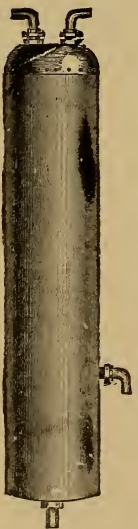


Fig. 634.

COPPER BOILERS.

Heavy Pressure Rivet Head.

| Capacity.       | Price, each, |
|-----------------|--------------|
| 30 gallons..... | 26.00        |
| 40 ".....       | 34.00        |
| 60 ".....       | 55.00        |
| 80 ".....       | 72.00        |
| 100 ".....      | 95.00        |

Above Boilers are for pressure not to exceed 40 lbs. For heavier pressure we make special Boilers. Every Copper Boiler should be fitted with Vacuum Valve.



## PATENT SEAMLESS RANGE BOILERS.

Copper.



Fig. 635.



Fig. 636.

For many years efforts have been made to produce a reliable House Boiler, in which the danger of bursting or collapsing, and destruction by rust as in iron, could be overcome. We have succeeded in producing this desired article, and now offer with perfect confidence, our Patent Seamless Range Boilers.

They are made of Copper, *and guaranteed to stand a vacuum*, and are all tested at *Two Hundred Pounds* internal pressure to the square inch. The Boiler consists of two seamless shells, with rounded ends to insure greater strength, joined at the center by a long lap joint, which is covered with a wide seamless band. By cupping these shells from the sheet, a uniform thickness, spring temper, and increased tensile strength are obtained. A seamless band is attached to the bottom of the Boiler, which adapts it to any stand in the market. They are coated with tin on the inside, are handsome, durable, and well finished in all respects, and especially designed for first class residences.

---

|                             |       |
|-----------------------------|-------|
| Price, 30 gallon, each..... | 30.00 |
| Price, 35 gallon, each..... | 35.00 |
| Price, 40 gallon, each..... | 40.00 |

---

COPPER GOODS.

COPPER BATH TUB.

5, 5½ or 6 feet long.



Fig. 637.

Outside Width at Head and Foot... .24 inches. | Outside Depth.....19 inches.  
Outside Length of Tubs, 5, 5½, and 6 feet

|                             |       |       |       |       |       |       |
|-----------------------------|-------|-------|-------|-------|-------|-------|
| Weight of Copper, ounces... | 10    | 12    | 14    | 16    | 18    | 20    |
| Price, each.....            | 13.75 | 15.75 | 17.75 | 19.75 | 21.75 | 23.75 |

Zinc Tubs, 5, 5½ or 6 feet, price each..... 8.00 | Larger or Special Sizes of Tubs, to order.

FRENCH BATH TUB.

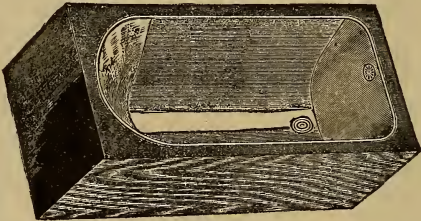


Fig. 638.

Outside Width at Head and Foot....26¼ inches. | Outside Depth.....22 inches.  
Standard Length, 4½ feet.

|                                                   |       |       |       |       |       |       |
|---------------------------------------------------|-------|-------|-------|-------|-------|-------|
| Weight of Copper, ounces,.....                    | 10    | 12    | 14    | 16    | 18    | 20    |
| Price, 4 feet, 6 inch long, (Standard), each..... | 15.00 | 17.00 | 19.00 | 21.00 | 23.00 | 25.00 |
| “ 5 “ long, each.....                             | 17.00 | 19.00 | 21.00 | 23.00 | 25.00 | 27.00 |
| “ 5 “ 6 inch long, each.....                      |       | 21.00 | 23.00 | 25.00 | 27.00 | 29.00 |
| “ 6 “ long, each.....                             |       | 23.00 | 25.00 | 27.00 | 29.00 | 31.00 |

SEAT TUB.

Size, 24 x 22 inches.

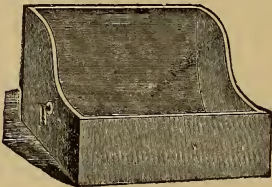


Fig. 639.

|                               |      |       |       |       |
|-------------------------------|------|-------|-------|-------|
| Weight of Copper, ounces..... | 10   | 12    | 14    | 16    |
| Price, each.....              | 9.00 | 10 00 | 11.00 | 12.00 |

FOOT TUB.

Size, 16 x 20 inches, 10 inches deep.



Fig. 640.

|                               |      |      |      |       |
|-------------------------------|------|------|------|-------|
| Weight of Copper, ounces..... | 10   | 12   | 14   | 16    |
| Price, each.....              | 7.00 | 8.00 | 9.00 | 10.00 |

## SQUARE COPPER PANTRY SINK.

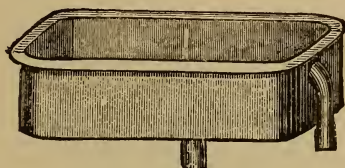


Fig. 641.

|                   |         |         |         |         |         |         |         |         |
|-------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| Size, inches..... | 12 x 18 | 12 x 20 | 14 x 16 | 14 x 20 | 14 x 24 | 16 x 24 | 16 x 30 | 18 x 30 |
| Price, each.....  | 4.50    | 5.00    | 4.50    | 6.00    | 7.00    | 8.00    | 10.00   | 11.00   |

## OVAL COPPER PANTRY SINK.

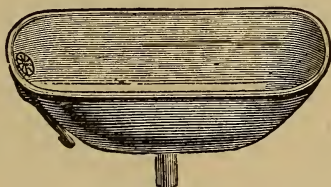


Fig. 642.

|                   |         |         |         |         |         |         |         |         |
|-------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| Size, inches..... | 12 x 18 | 12 x 20 | 14 x 16 | 14 x 20 | 14 x 24 | 16 x 24 | 16 x 30 | 18 x 30 |
| Price, each ..... | 5.00    | 5.50    | 5.00    | 6.50    | 8.00    | 9.00    | 11.00   | 12.00   |

## COPPER BALL.



Fig. 643.

|                     |      |      |       |       |       |       |
|---------------------|------|------|-------|-------|-------|-------|
| Size, inches .....  | 5    | 6    | 7     | 8     | 10    | 12    |
| Price, per doz..... | 6.00 | 7.00 | 10.50 | 24.00 | 48.00 | 72.00 |

## CLOSET PAN.



Fig. 644.

|                             |      |       |       |
|-----------------------------|------|-------|-------|
| Weight, ounces, Copper..... | 18   | 20    | 24    |
| Price, per doz.....         | 8.00 | 10.00 | 12.00 |



COPPER ALCOVE.

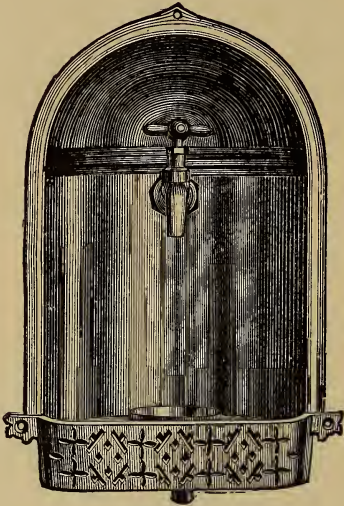


Fig. 645.

|                              |       |
|------------------------------|-------|
| Price, No. 1, each . . . . . | 12.00 |
| Price, No. 2, each . . . . . | 9.50  |

TINNED COPPER SHOWERS.

Plain Shower.



Fig. 646.

|                          |       |
|--------------------------|-------|
| Price, per doz . . . . . | 12.00 |
|--------------------------|-------|

FANCY TUBULAR SHOWER.

With Flange and Thimble.



Fig. 647.

|                         |       |
|-------------------------|-------|
| Price, per doz. . . . . | 32.00 |
|-------------------------|-------|

## WATER HEATER AND HOT WATER RESERVOIR.

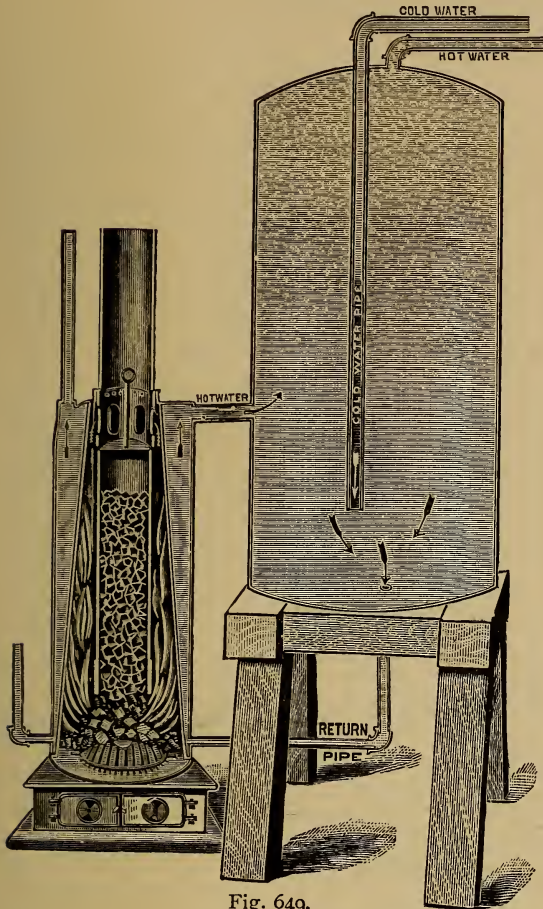


Fig. 649.

For Barber Shops, Bath Houses,  
Hotels, and Small Green  
Houses.

The above Heater is particularly adapted for all places where a large quantity of hot water is used. The Stove can be used without the Reservoir if you have a storage place for the heated water, and so connected with Stove as to circulate. The door to feed by is in a portion of Smoke Pipe which we furnish. Fire can be kept in Self-Feeders for twelve hours without attention.

### Small Sizes—Not Self-Feeders.

| Size of Furnace. | Approximate Heating Power, 2-inch Pipe. | Heating Surface, Sq. inches. | Heating Capacity, Galls. per Hour. | Approximate Weight. | Price. |
|------------------|-----------------------------------------|------------------------------|------------------------------------|---------------------|--------|
| 10 x 15          | 50 ft.                                  | 342                          | 30                                 | 70 lbs.             | 20.00  |
| 10 x 18          | 60 "                                    | 399                          | 40                                 | 75 "                | 21.00  |
| 12 x 24          | 100 "                                   | 648                          | 65                                 | 125 "               | 25.00  |
| 12 x 30          | 125 "                                   | 792                          | 75                                 | 155 "               | 26.50  |
| 14 x 30          | 150 "                                   | 945                          | 100                                | 185 "               | 30.00  |
| 14 x 36          | 175 "                                   | 1,066                        | 125                                | 205 "               | 32.00  |

### SELF-FEEDING SIZES.

| Size of Furnace. | Approximate Heating Power, 4-inch Pipe. | Heating Surface, Sq. inches. | Heating Capacity, Galls. per Hour. | Approximate Weight. | Price. |
|------------------|-----------------------------------------|------------------------------|------------------------------------|---------------------|--------|
| 16 x 30          | 250 feet.                               | 1,224                        | 140                                | 340 pounds.         | 57.50  |
| 16 x 36          | 300 "                                   | 1,435                        | 150                                | 380 "               | 60.00  |
| 20 x 30          | 425 "                                   | 1,584                        | 200                                | 445 "               | 72.00  |
| 20 x 36          | 450 "                                   | 1,720                        | 250                                | 500 "               | 75.00  |
| 20 x 42          | 500 "                                   | 2,064                        | 285                                | 535 "               | 95.00  |
| 24 x 36          | 700 "                                   | 2,376                        | 300                                | 715 "               | 105.00 |
| 24 x 42          | 1,000 "                                 | 2,548                        | 325                                | 740 "               | 110.00 |
| 30 x 42          | 1,200 "                                 | 3,536                        | 650                                | 1,230 "             | 130.00 |
| 30 x 48          | 1,250 "                                 | 4,002                        | 700                                | 1,280 "             | 135.00 |
| 36 x 42          | 1,450 "                                 | 4,105                        | 900                                | 1,950 "             | 175.00 |
| 36 x 48          | 1,550 "                                 | 4,588                        | 1,000                              | 2,000 "             | 195.00 |
| 42 x 42          | 2,000 "                                 | 5,356                        | 1,200                              | 2,600 "             | 215.00 |
| 42 x 48          | 2,400 "                                 | 5,928                        | 1,300                              | 2,700 "             | 225.00 |

### IRON TANKS.

| Length. | Diameter.  | Capacity. | Price. | Length. | Diameter.  | Capacity.  | Price. |
|---------|------------|-----------|--------|---------|------------|------------|--------|
| 5 feet. | 20 inches. | 82 galls. | 40.00  | 6 feet. | 30 inches. | 220 galls. | 85.00  |
| 5 "     | 24 "       | 120 "     | 55.00  | 9 "     | 30 "       | 332 "      | 95.00  |
| 6 "     | 24 "       | 142 "     | 65.00  | 5 "     | 36 "       | 265 "      | 90.00  |
| 9 "     | 24 "       | 212 "     | 84.00  | 6 "     | 36 "       | 320 "      | 95.00  |
| 5 "     | 30 "       | 180 "     | 80.00  | 9 "     | 36 "       | 470 "      | 130.00 |

## LEAD TRAPS AND BENDS.

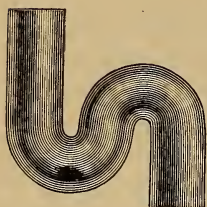


Fig. 650.

### FULL S TRAP.

|                            |      |
|----------------------------|------|
| Price, 4 inch, each.....   | 1.90 |
| " 3 " with Trap Screw..... | 1.70 |
| " 2 " " ".....             | 1.10 |
| " 1½ " " ".....            | .80  |
| " 1¼ " " ".....            | .65  |

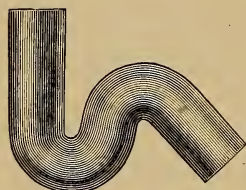


Fig. 651.

### THREE QUARTER S TRAP.

|                            |      |
|----------------------------|------|
| Price, 4 inch, each.....   | 1.90 |
| " 3 " with Trap Screw..... | 1.70 |
| " 2 " " ".....             | 1.10 |
| " 1½ " " ".....            | .80  |
| " 1¼ " " ".....            | .65  |

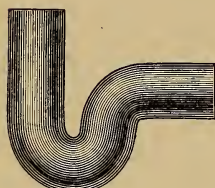


Fig. 652.

### HALF S TRAP.

|                            |      |
|----------------------------|------|
| Price, 4 inch, each.....   | 1.55 |
| " 3 " with Trap Screw..... | 1.35 |
| " 2 " " ".....             | 1.00 |
| " 1½ " " ".....            | .70  |
| " 1¼ " " ".....            | .55  |



Fig. 653.

### RUNNING TRAP.

|                            |      |
|----------------------------|------|
| Price, 4 inch, each.....   | 2.20 |
| " 3 " with Trap Screw..... | 1.70 |
| " 3 " " ".....             | 1.10 |
| " 1½ " " ".....            | .80  |
| " 1¼ " " ".....            | .65  |

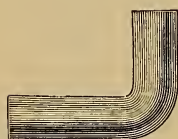


Fig. 654.

### LONG LEAD BEND.

|                          |      |
|--------------------------|------|
| Price, 4 inch, each..... | 1.35 |
| " 3 ".....               | 1.00 |
| " 2 ".....               | .55  |
| " 1½ ".....              | .45  |
| " 1¼ ".....              | .40  |



Fig. 655.

### SHORT LEAD BEND.

|                          |      |
|--------------------------|------|
| Price, 4 inch, each..... | 0.90 |
| " 3 ".....               | .75  |
| " 2 ".....               | .45  |
| " 1½ ".....              | .40  |
| " 1¼ ".....              | .30  |



BOWER'S TRAPS.

S Trap.

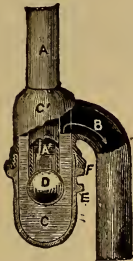


Fig. 656.

Half S Trap.



Fig. 657.

| SIZE.   |             | FULL S.                         |                           | HALF S.                         |                           | RUNNING.                        |                           |
|---------|-------------|---------------------------------|---------------------------|---------------------------------|---------------------------|---------------------------------|---------------------------|
| Inlet.  | Outlet.     | Lead and Glass,<br>Price, each. | All Lead,<br>Price, each. | Lead and Glass,<br>Price, each. | All Lead,<br>Price, each. | Lead and Glass,<br>Price, each. | All Lead,<br>Price, each. |
| 1 inch. | 1 1/4 inch. | 1.00                            | 1.20                      | 0.95                            | 1.15                      | .....                           | .....                     |
| 1 1/4 " | 1 1/4 "     | 1.05                            | 1.25                      | 1.00                            | 1.20                      | 1.10                            | 1.30                      |
| 1 1/4 " | 1 1/2 "     | 1.10                            | 1.30                      | 1.05                            | 1.25                      | .....                           | .....                     |
| 1 1/2 " | 1 1/2 "     | 1.38                            | 1.63                      | 1.30                            | 1.55                      | 1.40                            | 1.65                      |
| 1 1/2 " | 2 "         | 1.50                            | 1.75                      | 1.40                            | 1.65                      | .....                           | .....                     |

EXTRAS.

|                                 |      |
|---------------------------------|------|
| Price, Small Glasses, each..... | 0.10 |
| " Large " " .....               | .15  |
| " Small Balls, " .....          | .10  |
| " Large " " .....               | .15  |
| " Small Lead Cups, each.....    | .30  |
| " Large " " .....               | .40  |

BRASS TRAP.

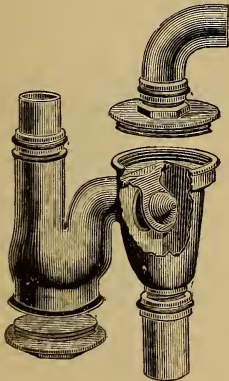


Fig. 658.

BRASS URINAL TRAP.

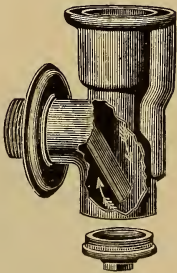


Fig. 659.

This is the best Trap on the market to-day, is very serviceable, and should be used in all good work.

Price, 1 1/4 inch, each ..... 6.00

Price, each..... 3.00

Price, Nickel Plated, each. . . . . 3.50

IRON TRAP.

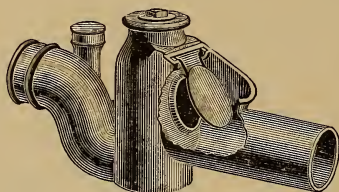


Fig. 660.

| Size, inches.... | 4     | 6     | 8     | 9      | 10     |
|------------------|-------|-------|-------|--------|--------|
| Iron Soil Pipe.. | 11.00 | 15.00 | 50.00 | .....  | 100.00 |
| Sewer Pipe ..... | ..... | 15 00 | ..... | 100.00 | .....  |

The only Sewer Trap that has proved a success. The Gate is solid brass. Will prevent sewer gas from entering house or water backing up. In ordering always state if for Iron Soil Pipe or Sewer Pipe.

IRON CLEANOUT.

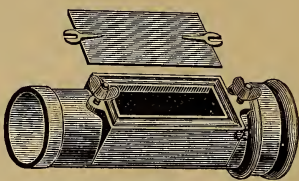


Fig. 661.

| Size, inches | 2     | 3     | 4    | 5    | 6    | 8     |
|--------------|-------|-------|------|------|------|-------|
| Standard ..  | .85   | 1.25  | 1.75 | 2.75 | 3.75 | ..... |
| Ex. Heavy    | ..... | ..... | 3.50 | 5.00 | 6.00 | 9.25  |

No fitting ever made has given the general satisfaction that this Cleanout has. It should be put in every building. The opening is large enough to allow a man to put his arm in or can put a rod in and clean from either side.

RUBBER COUPLING.

For Water Closet Bowls, Urinals, Hoppers, Wash Basins, etc.

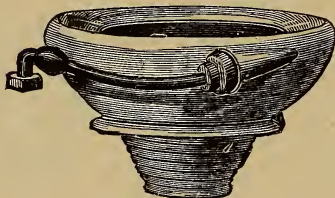


Fig. 662.

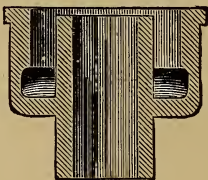


Fig. 663.  
Sectional View.

|                      |      |
|----------------------|------|
| Price, per doz. .... | 1.50 |
|----------------------|------|

RUBBER COUPLING.

For Connecting Rubber Plug Bowls, Urinals, the Overflow of Common Overflow Bowls, and all kinds of Earthenware to the Waste Pipe.

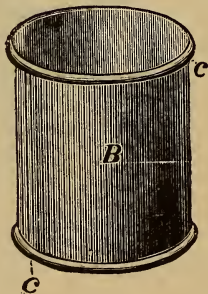


Fig. 664.

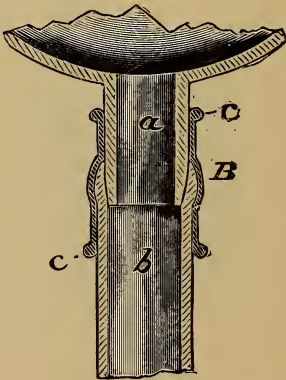
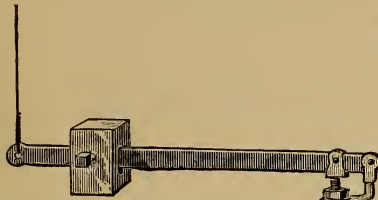


Fig. 665.  
Sectional View Showing Application.

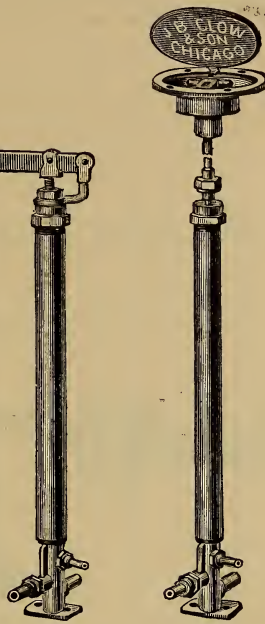
|                      |      |
|----------------------|------|
| Price, per doz. .... | 1.25 |
|----------------------|------|

## ECLIPSE STOP AND WASTE VALVES.



Will Not Waste While  
Water is Running.

Can be Repaired Without  
Digging Up.



No. 1.  
Fig. 666.



No. 2.  
Fig. 667.



No. 3.  
Fig. 668.

The top is made of cast iron, painted, and very neat in design. The valve, valve seat, screw and all bearings are made of brass. Both inside and outside wrought pipes are galvanized, so no part of the stop and waste, either in the ground or above, is liable to corrode.

The Valve is made of brass and opens with and closes against the pressure. The entire friction being simply an up and down movement of one half inch. The waste opening is perfection itself, as it closes quick as screw is turned to open, and is always open when Valve is closed. This waste cannot possibly get out of repair. This Valve we claim to be the simplest, most durable, and better adapted to any kind of water or pressure than any Stop and Waste Valve made, and will close without the slightest reaction.

Should repairs be needed same can be made without digging up Valve, by simply removing the two bolts on top of same, thereby allowing the drawing out of inside pipe and valve, and this is the only valve of this kind that can be repaired without digging up.

*We guarantee stop and waste to give satisfaction.*

No. 1 Valve is for use with cable and weight, and as lever is reversible, can be used to close when weight is down, or by reversing lever will close when weight is up. This one makes a most excellent self-closing hopper cock, one of its best points being the ease with which valve can be taken up and repaired, without digging up—a very important point in a hopper cock.

No. 2 Valve is especially adapted for running in straight line from valve to floor of kitchen or other place, on floors above basement, and is far superior to cable as there is no trouble with cable stretching, and entire weight of pipe is held by iron cover which is set in the floor, so valve works just the same if used on first or fourth floor. For flats this valve has no equal.

No. 3 Valve we recommend for use in cellars or basements, especially where cellars have cement floors, as it is the only valve of this kind that can be taken out and repaired without digging up.

Prices, Nos. 1, 2 or 3, each..... 5.00



ECLIPSE SELF-CLOSING HOPPER COCK.

ADJUSTABLE TO ANY PRESSURE.

SIMPLE, RELIABLE AND CHEAP.

Anti-Freezing. No Springs. Closes Against the Pressure. No Reaction. Positive Waste.

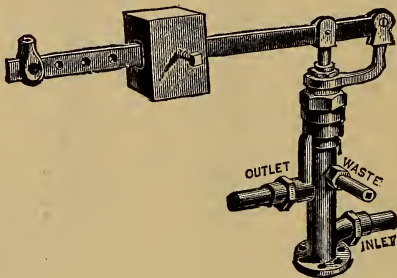


Fig. 669.

List Price, without Cups and Pulls, each ..... 5.00

Length from bottom of Valve to top of Lever, 6 inches— $\frac{3}{4}$  inch Inlet with Coupling— $\frac{3}{4}$  inch Outlet with Coupling— $\frac{3}{8}$  inch Waste with Coupling.

Cannot waste when open the least particle, or when open fully. When closed, “waste” is always open but retains sufficient water to prevent sewer gas from returning through “waste.” At same time valve is Anti-Freezing, because water so retained is on line with Inlet.

DESCRIPTION.

This Valve is designed to be used as a Hopper Cock, and is so constructed in shape and strength as to recommend it where Cock is desired to be placed on floor at side of Hopper. The construction of Valve is similar to our No. 1 Stop and Waste Valve, described on page 233. This Valve is particularly recommended for the following reasons: It is strong, simple and durable; there are no springs in this Valve; it has adjustable weight on Lever to adapt it to any pressure; it has less friction than other valves used for same purpose; the waste is positively closed when Valve is open least particle, or when open fully; when Valve is closed, waste is always open and is trapped against sewer gas; it closes against the pressure, thereby preventing reaction or knocking; it can be repaired quickly and easily by simply unscrewing the top nut thereby allowing of the drawing out of inside rod and plunger when old plunger can be unscrewed and replaced by new plunger in a moment's time and at a trifling expense.

We guarantee this Valve to give satisfaction.

## CHAMPION AIR VENT.

Self-acting, Reliable, Cannot Leak, Cannot Get Out of Repair.

Full Size Cut.

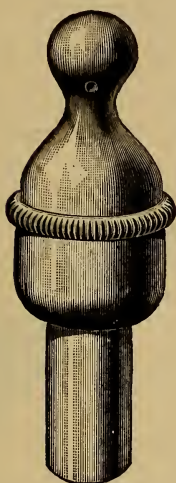


Fig. 670.

Sectional.

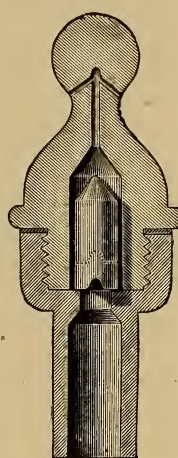


Fig. 671.

|                               |       |
|-------------------------------|-------|
| Price, Brass, per doz.....    | 15.00 |
| Price, Nickered. per doz..... | 20.00 |

### DESCRIPTION.

This Vent is designed to be used in connection with stop and waste cocks, and to be placed on the ends of supply pipes throughout buildings. It is a well-known fact that the mere turning off of stop and waste cock of any description, and closing the supply of water does not insure the draining of upper pipes or prevent freezing. Unless Automatic Air Vents are used, it is necessary to open a number of cocks to give air or vent to upper end of pipes, and where self-closing cocks are used this is particularly annoying; hence, this invention. This Vent is perfectly reliable; cannot leak; cannot get out of repair; and is self-acting. Where these Vents are used, servants cannot make mistakes and cause one or more pipes to be frozen. Nor can they forget to turn off one or more cocks before turning on water, and cause the house to be flooded, as there will be no cocks to be opened simply for air or vent. Have these Vents placed on end of each pipe, they are ornamental, cheap and reliable, and, when used in connection with our No. 1 and No. 2 Stop and Waste Valve, by the simple turning of a wheel or a crank in the bath-room or any other more desirable part of the house, you are enabled to turn off water in a moment, drain every pipe throughout the house, and be assured and guaranteed that there will be no frozen pipes nor any overflow anywhere. And in a moment from any one desirable point, water can be turned on for all pipes without the annoyance of running through house to open stop and waste, and closing other cocks.

# ECLIPSE HYDRANTS AND STREET WASHERS.

## COMPRESSION WITH ANTI-FREEZING VALVE.

### PATENTED.

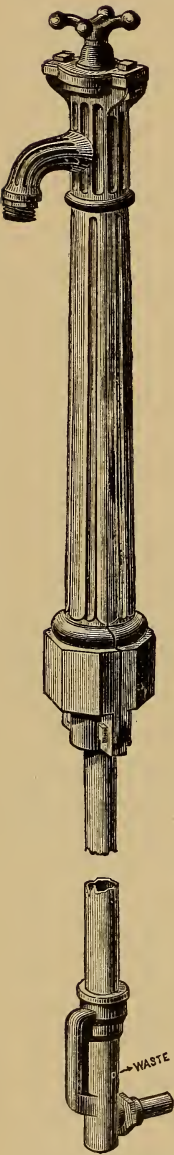


Fig. 672.

Being known to the trade as the manufacturers of the celebrated "Chicago" Hydrants and Street Washers, an article which has given universal satisfaction throughout the entire country, and which has had larger sales than any other Hydrant made, we now stand on our reputation as manufacturers in bringing to your notice our newly invented Eclipse Hydrants and Street Washers, and recommending them to be the best anti-freezing Hydrants and Street Washers made.

We recommend this Hydrant as the simplest, neatest, and while light yet the most durable Hydrant made.

The stock is made of cast-iron, painted, and very neat in design. The valve, valve seat, screw, and all bearings are made of brass. Both inside and outside wrought pipes are galvanized, so no part of the Hydrant, either in the ground or above, is liable to corrode.

The Nozzle is stationary. The Nipple, with thread on same, can be replaced by plain Nipple where water licenses make this desirable.

The Valve is made of brass and opens with and closes against the pressure. The entire friction being simply an up and down movement of one half inch. The waste opening is perfection itself, as it closes even before water reaches nozzle, and is always open when Hydrant is closed. This waste cannot possibly get out of repair. This valve we claim to be the simplest, most durable and better adapted to any kind of water or pressure than any Hydrant Valve made, and will close without the slightest reaction.

Should repairs be needed same can be made without digging up Hydrant or Street Washer, by simply removing the two bolts on top of same, thereby allowing the drawing out of inside pipe and valve.

We guarantee this Hydrant and Street Washer to give satisfaction.

We also recommend this Hydrant and Street Washer as the cheapest in the market. And as the article is light in weight and can easily be packed in boxes it is subject to better freight classification and a much better freight rate than other Hydrants.

(Package charged extra.)

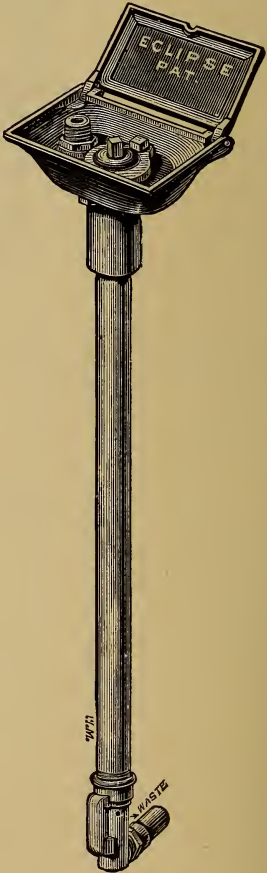


Fig. 673.

| To set in Ground, feet.....                | 3     | 4     | 5     | 6     |
|--------------------------------------------|-------|-------|-------|-------|
| Price, 3/4 inch Hydrants, each.....        | 10.00 | 11.00 | 12.00 | 14.00 |
| Price, 1 inch Hydrants, each .....         | 12.50 | 13.50 | 14.50 | 15.50 |
| Price, 3/4 inch Street Washers, each... .. | 8.50  | 9.50  | 10.50 | 11.50 |
| Price, 1 inch Street Washers, each .....   | 10.00 | 11.00 | 12.00 | 13.00 |



## ECLIPSE WALL HYDRANT AND WASHER.

WITH COMPRESSION VALVE.

No. 4.

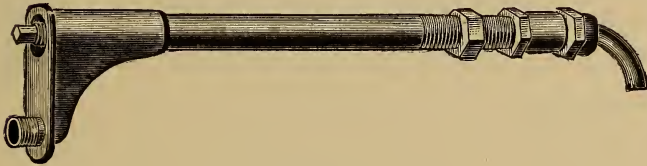


Fig. 674.

With Key.

Length, 27 inches. Inlet,  $\frac{3}{4}$  inch, with bent Coupling. Outlet,  $\frac{3}{4}$  inch, for Hose.

List Price, each ..... 5.00

Longer Hydrants or other sizes made to order.

## DESCRIPTION.

This Hydrant is designed to be placed in the wall of a building, thereby offering no obstruction to a yard or lawn. The end of Hydrant for inside of wall is fitted with bent Coupling for lead or iron pipe, and also with a Jam Nut to screw, so that outside end of Hydrant can be brought tight and flush with outside of wall and Hydrant held in a firm position. Outside end of Hydrant is made of brass, with thread cut on outlet for Hose, and brass nut for opening and closing Valve. The valve and all working parts are made of brass. Connecting Pipe and Rod are galvanized. The Valve closes against the pressure. Entire length of Hydrant is 27 inches, adapted for walls up to 24 inches. Longer Hydrants or larger sized openings made to order. This Hydrant can be repaired without taking out of wall.

CHICAGO PATENT

Anti-Freezing Valve Hydrants

AND

STREET WASHERS.



Fig. 675.

The Valve is recommended as the simplest, strongest and most durable, and is better adapted to any kind of pressure or water than any other Valve made.

The case of Hydrant is cast-iron, and very neat in design; the valve; nozzle, screw and all bearings are made of brass, and inlet is fitted with brass union, for either lead or iron pipe.

They are positively anti-freezing, and can be easily repaired without digging up the stock.

The valve is so simple in construction and the friction so little as compared with others that repairs are seldom necessary.

We guarantee them to give satisfaction.

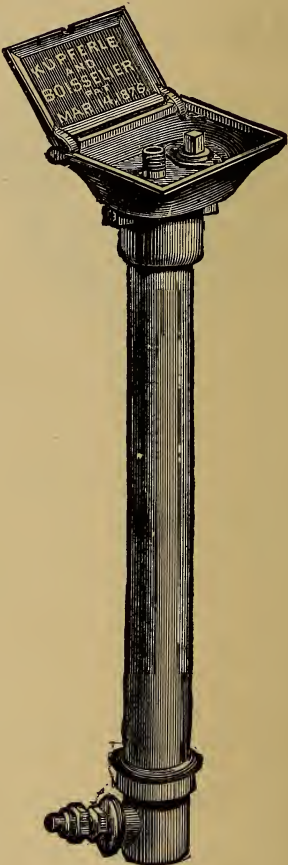


Fig. 676.

| To set in Ground, feet .....             | 3     | 4     | 5     | 6     |
|------------------------------------------|-------|-------|-------|-------|
| Price, 3/4 inch Hydrants, each .....     | 10.00 | 11.00 | 12.00 | 14.00 |
| Price, 1 inch Hydrants, each .....       | 12.50 | 13.50 | 14.50 | 15.50 |
| Price, 3/4 inch Street Washer, each..... | 8.50  | 9.50  | 10.50 | 11.50 |
| Price, 1 inch Street Washers, each.....  | 10.00 | 11.00 | 12.00 | 13.00 |

## REPAIR LIST.

ALL PARTS INTERCHANGEABLE.

### FOR ECLIPSE HYDRANTS AND STREET WASHERS.



Fig. 677.



Fig. 678.



Fig. 679.



Fig. 680.

#### ECLIPSE VALVE BODY.

|                                                                                          |      |
|------------------------------------------------------------------------------------------|------|
| Fig. 677, for $\frac{3}{4}$ inch Eclipse Compression Hydrant or Street Washer, each..... | 1.50 |
| Fig. 677, for 1 inch Eclipse Compression Hydrant or Street Washer, each.....             | 1.75 |

#### ECLIPSE VALVE PLUNGER.

|                                                                                          |     |
|------------------------------------------------------------------------------------------|-----|
| Fig. 678, for $\frac{3}{4}$ inch Eclipse Compression Hydrant or Street Washer, each..... | .50 |
| Fig. 678, for 1 inch Eclipse Compression Hydrant or Street Washer, each.....             | .75 |

#### SAND CUP, TO COVER VALVE.

|                                                                              |     |
|------------------------------------------------------------------------------|-----|
| Fig. 679, for $\frac{3}{4}$ inch Eclipse Hydrant or Street Washer, each..... | .20 |
| Fig. 679, for 1 inch Eclipse Hydrant or Street Washer, each.....             | .30 |

#### NOZZLE SECTION, WITH STEM AND SOCKET.

|                                                                         |      |
|-------------------------------------------------------------------------|------|
| Fig. 680, for $\frac{3}{4}$ inch Eclipse Compression Hydrant, each..... | 2.00 |
| Fig. 680, for 1 inch Eclipse Compression Hydrant, each.....             | 2.50 |

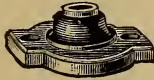


Fig. 681.

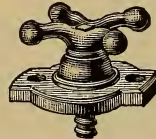


Fig. 682.

#### ECLIPSE HYDRANT CAP.

|                                                                         |     |
|-------------------------------------------------------------------------|-----|
| Fig. 681, for $\frac{3}{4}$ inch Eclipse Compression Hydrant, each..... | .25 |
| Fig. 681, for 1 inch Eclipse Compression Hydrant, each.....             | .35 |

#### CAP, HANDLES AND SCREW, COMPLETE.

|                                                                         |      |
|-------------------------------------------------------------------------|------|
| Fig. 682, for $\frac{3}{4}$ inch Eclipse Compression Hydrant, each..... | .70  |
| Fig. 682, for 1 inch Eclipse Compression Hydrant, each.....             | 1.00 |

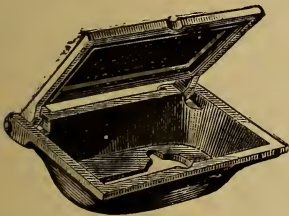


Fig. 683.



Fig. 684.



Fig. 686.

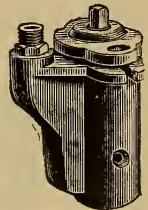


Fig. 685.

#### ECLIPSE STREET WASHER BOXES.

|                                                                   |      |
|-------------------------------------------------------------------|------|
| Fig. 683, for $\frac{3}{4}$ inch Eclipse Street Washer, each..... | .70  |
| Fig. 683, for 1 inch Eclipse Street Washer, each.....             | 1.00 |

#### STREET WASHER CAPS.

|                                                                   |     |
|-------------------------------------------------------------------|-----|
| Fig. 684, for $\frac{3}{4}$ inch Eclipse Street Washer, each..... | .20 |
| Fig. 684, for 1 inch Eclipse Street Washer, each.....             | .30 |

#### ECLIPSE STREET WASHER YOKES, COMPLETE.

|                                                                   |      |
|-------------------------------------------------------------------|------|
| Fig. 685, for $\frac{3}{4}$ inch Eclipse Street Washer, each..... | 2.00 |
| Fig. 685, for 1 inch Eclipse Street Washer, each.....             | 2.50 |

#### BRASS NIPPLE, FOR ECLIPSE HYDRANT NOZZLE.

|                                                                  |     |
|------------------------------------------------------------------|-----|
| Fig. 686, for $\frac{3}{4}$ inch Hydrant, with Hose Thread.....  | .20 |
| Fig. 686, for 1 inch Hydrant, with Hose Thread.....              | .30 |
| Fig. 686, for $1\frac{1}{4}$ inch Hydrant, with Hose Thread..... | .40 |



REPAIR LIST.  
FOR CHICAGO HYDRANTS AND STREET WASHERS.

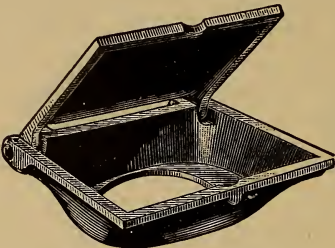


Fig. 687.

STREET WASHER BOXES.

|                                                                   |      |
|-------------------------------------------------------------------|------|
| Fig. 687, for $\frac{3}{4}$ inch Chicago Street Washer, each..... | .70  |
| Fig. 687, for 1 inch Chicago Street Washer, each.....             | 1.00 |

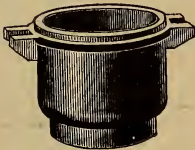


Fig. 688.

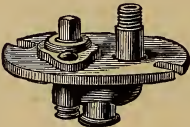


Fig. 689.

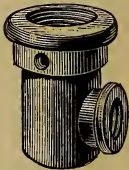


Fig. 690.

STREET WASHER NECK.

|                                                                   |     |
|-------------------------------------------------------------------|-----|
| Fig. 688, for $\frac{3}{4}$ inch Chicago Street Washer, each..... | .30 |
| Fig. 688, for 1 inch Chicago Street Washer, each.....             | .40 |

STREET WASHER PLATE, NOZZLE AND SCREW, COMPLETE.

|                                                                   |      |
|-------------------------------------------------------------------|------|
| Fig. 689, for $\frac{3}{4}$ inch Chicago Street Washer, each..... | 1.00 |
| Fig. 689, for 1 inch Chicago Street Washer, each.....             | 1.25 |

IRON BOTTOMS FOR VALVES.

|                                                                              |     |
|------------------------------------------------------------------------------|-----|
| Fig. 690, for $\frac{3}{4}$ inch Chicago Hydrant or Street Washer, each..... | .60 |
| Fig. 690, for 1 inch Chicago Hydrant or Street Washer, each.....             | .80 |



Fig. 691.



Fig. 692.



Fig. 693.

VALVES.

|                                                                              |      |
|------------------------------------------------------------------------------|------|
| Fig. 691, for $\frac{3}{4}$ inch Chicago Hydrant or Street Washer, each..... | 1.80 |
| Fig. 691, for 1 inch Chicago Hydrant or Street Washer, each....              | 2.50 |

HYDRANT CAP, HANDLE AND SCREW, COMPLETE.

|                                                             |      |
|-------------------------------------------------------------|------|
| Fig. 692, for $\frac{3}{4}$ inch Chicago Hydrant, each..... | 1.50 |
| Fig. 692, for 1 inch Chicago Hydrant, each.....             | 2.00 |

NOZZLE AND PLATE.

|                                                             |     |
|-------------------------------------------------------------|-----|
| Fig. 693, for $\frac{3}{4}$ inch Chicago Hydrant, each..... | .60 |
| Fig. 693, for 1 inch Chicago Hydrant, each.....             | .90 |

**ECLIPSE FIRE HYDRANT—IMPROVED.**

Brass Blunted. Leather Valve. Positive Waste. Closes against the pressure.

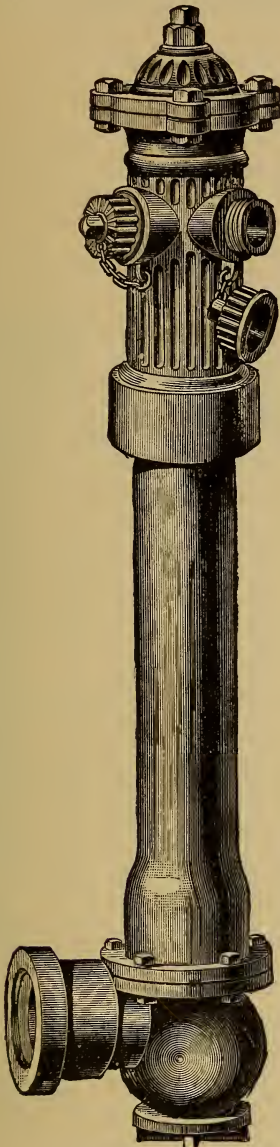


Fig. 694.

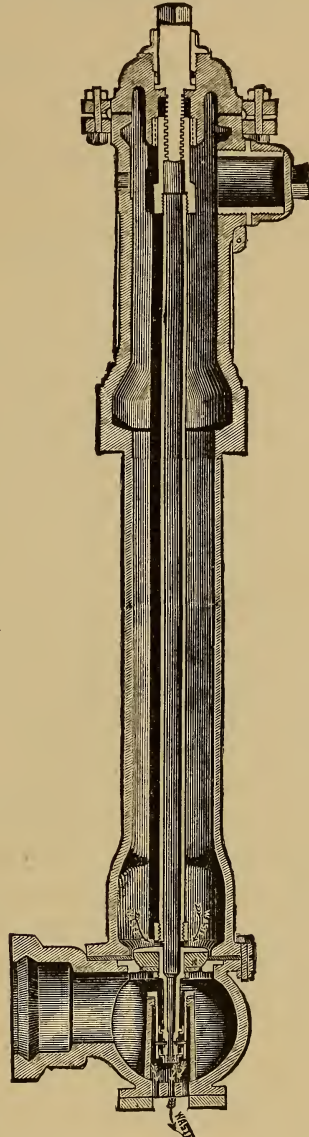


Fig. 695.

See instructions for ordering on opposite page.

**Sizes and List Price.**

| Diam.<br>of Inlet<br>Pipe. | Pave-<br>ment to<br>center of<br>Inlet. | One 2½<br>in. Hose<br>Nozzle. | Two<br>2½ in.<br>Hose<br>Nozzles. | Three 2½<br>in. Hose<br>Nozzles. | One<br>Steamer<br>Nozzle. | One<br>Steamer<br>and one<br>2½ inch<br>Nozzle. | One<br>Steamer<br>and two<br>2½ inch<br>Nozzles. | Frost<br>Case<br>Standard<br>length. | Each ft.<br>in length<br>of Stand<br>Pipe,<br>extra. | Each ft.<br>in length<br>of Frost<br>Case,<br>extra. |
|----------------------------|-----------------------------------------|-------------------------------|-----------------------------------|----------------------------------|---------------------------|-------------------------------------------------|--------------------------------------------------|--------------------------------------|------------------------------------------------------|------------------------------------------------------|
| 3 in.                      | 5 ft.                                   | 27.50                         | 29.50                             | 31.50                            | 29.00                     | 31.50                                           | 33.50                                            | 3.00                                 | 1.20                                                 | .50                                                  |
| 4 "                        | 5 "                                     | 32.00                         | 34.00                             | 36.00                            | 34.00                     | 36.00                                           | 38.00                                            | 4.00                                 | 1.50                                                 | .75                                                  |
| 5 "                        | 5 "                                     | 38.00                         | 40.00                             | 42.00                            | 40.00                     | 42.00                                           | 44.00                                            | 5.00                                 | 1.75                                                 | 1.00                                                 |
| 6 "                        | 5 "                                     | 47.00                         | 49.00                             | 51.00                            | 49.00                     | 51.00                                           | 53.00                                            | 6.00                                 | 2.25                                                 | 1.25                                                 |

Unless otherwise ordered, all Hydrants will be made up to turn to the left in opening.

Above Hydrants also made with Wrought Stand Pipe, if so ordered.

The Nut for opening Hydrant and Nut on Nozzle Caps will always be made pentagon (or five sides), unless otherwise ordered.

## ECLIPSE FIRE HYDRANTS.

### IMPROVED.

The Cuts on the opposite page illustrate the design and working of our No. 3 Improved Eclipse Fire Hydrant. Its principal points are as follows:

The Valve closes against the pressure.

The valve, valve seat, waste stem and cylinder, and all working parts are made of best quality cast brass.

The plunger operating in this valve is constructed with one rounded leather washer for opening and closing valve, and two small cup washers in waste cylinder for opening and closing Waste holes. These cup washers are of a superior design and construction and are positively reliable. We use two or more waste holes of  $\frac{3}{8}$  in. diameter each, the number being governed by length and diameter of stand pipe. These waste holes are placed at bottom or foot of Hydrant, thereby always positively insuring the waste of all water in stand pipe to the level of water in supply pipe, when hydrant is closed. When hydrant is open, waste is closed.

The top working parts are made of brass, the principal feature being a brass screw and swivel slide, through the employment of which the strain on the rod connecting with the plunger is a simple up and down movement; no turning or twisting of this rod. By this same arrangement, the brass nut, for turning on and off Hydrant, has no up and down movement.

The nut or screw for opening and closing Hydrant is made of superior quality gunmetal. The stock, stand pipe and valve case are made of cast iron.

The inside rod is made of galvanized wrought pipe, and is guaranteed to be stronger and to give better satisfaction than a solid rod of same dimensions would for this purpose.

The area of waterway is everywhere fully equal to the area of valve opening or inlet.

This Hydrant can be repaired without digging up, by simply removing the top flange bolts, thereby allowing of the drawing out of inside rod and valve plunger.

Each and every Hydrant is thoroughly tested at factory to 400 lbs. pressure, and is guaranteed to be free from flaws or defects and to give satisfaction.

Frost Cases furnished if desired.

---

**In Ordering Hydrants, please give Full Details, as follows:**

Post or Flush Hydrant.

Wrought or Cast Iron Stand Pipe.

Length from pavement to center of Inlet.

Size of bottom Connection.

Bell, Flange or Spigot Connection.

Size and Form of Nut to open Hydrant.

With or without Frost Case.

Number and size of Hose Nozzles.

Number and size of Steamer Nozzles.

State whether to turn to Right or Left to open.

Send Coupling or Nozzle Cap for gauge of Thread.



# ECLIPSE STOP BOX AND COCK.

## COCK AND BOX COMBINED.

### FOR WATER.

#### SIMPLE, RELIABLE AND CHEAP.

Best Valve made, adapted to any pressure.

Can be repaired without digging up.

Couplings for Lead or Iron Pipe.

Pentagon Brass Safety Nut at top can only be operated with key made specially for this purpose.

#### Sizes and List Prices.

| To set in Ground.    | Opening,<br>$\frac{3}{4}$ inch. | Opening,<br>1 inch. | Opening,<br>$1\frac{1}{4}$ inch. | Opening,<br>$1\frac{1}{2}$ inch. | Opening,<br>2 inch. |
|----------------------|---------------------------------|---------------------|----------------------------------|----------------------------------|---------------------|
| $1\frac{1}{2}$ feet. | 6.60                            | 9.50                | 18.00                            | 26.00                            | 36.00               |
| 2 "                  | 6.85                            | 10.25               | 18.75                            | 27.25                            | 37.25               |
| $2\frac{1}{2}$ "     | 7.10                            | 10.70               | 19.40                            | 28.20                            | 37.90               |
| 3 "                  | 7.35                            | 11.10               | 20.10                            | 29.10                            | 38.50               |
| 4 "                  | 7.75                            | 11.70               | 20.70                            | 29.70                            | 40.00               |
| 5 "                  | 8.25                            | 12.00               | 21.00                            | 30.50                            | 42.00               |
| 6 "                  | 8.85                            | 12.75               | 21.75                            | 31.75                            | 44.00               |
| 8 "                  | 10.25                           | 15.25               | 25.25                            | 37.00                            | 50.00               |
| 10 "                 | 12.75                           | 17.75               | 28.75                            | 43.00                            | 58.00               |

Keys extra, each, 30 cents.

#### DESCRIPTION.

This Stop Box and Cock is designed for water, and combines the following features:

We employ a Valve known as the Eclipse Anti-freezing Valve, which is in use on many thousands of our Hydrants and Street Washers, and is acknowledged to be the best, simplest and most reliable Valve for this purpose made. It is constructed of a brass body with a flat seat, and a leather mounted plunger so arranged as to prevent water from entering higher in Valve than upper line of outlet; and as its entire friction is a simple up and down movement of one-half inch, we insure durability, and obviate the liability of cock becoming tight or "sticking," as is the case with ground key or old style stop cocks.

To the Valve body we add galvanized pipe of any desired length, as shown in list, and connect same with cast box at top, as shown. In the inside of this pipe we employ a galvanized rod, connecting plunger with brass swivel slide and brass safety nut. This brass safety nut, for operating the Valve, is placed in the inside of cast box at top, and is pentagon (or five-sided), and is so protected by the box casting that it can be operated only by a key made specially for this purpose (see cut), and as this nut has no up and down movement, it never projects above bottom of cast box.

The top box is heavy cast iron with hinged cover, and is japanned and so constructed that pipe can not be filled or choked with water or gritty substances to injure the working thereof.

The Valve can be repaired without digging up, by removing the two top bolts, thereby allowing of the drawing out of inside rod and plunger.

Each and every Valve is tested at the factory, and guaranteed to be free from flaws or defects.

In the combination of these features we present an article which is simple and durable, and which we fully guarantee to give satisfaction under any kind of pressure or water, and on which we are in position to name low and interesting prices.

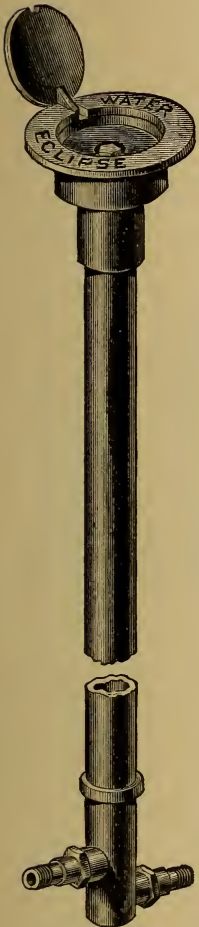


Fig. 696.

# CAST IRON EXTENSION SHUT-OFF BOXES

FOR

Water and Gas Service Pipes and Street Mains.

---

## SERVICE SHUT-OFF BOX.

This box is constructed in two sections, which screw together, the lower one inside of the upper section, thus forming one continuous pipe or box, easily adjusted exactly to the height and depth required, and will remain where set in position upright and firm as though all made in one piece.

The base has a broad flange on each side of the opening, thus preventing the box settling down and springing the service pipe.

The cover is secured with a brass bolt connecting to a heavy lug on the inside of the box, which prevents its being lost, or opened by any unauthorized person.

The bolt being of brass, will not corrode, and is therefore free at all times to be opened with the proper key for same. The head of this bolt is five sided, and is sunk in the cover flush with the surface.

## VALVE SHUT-OFF BOXES.

These are adjustable to length on same principle as the service box described above. They are made sufficiently strong to withstand the wear of the heaviest teams passing over them, and therefore are of great advantage in paved and improved streets.

They are constructed in three sections: the base or lower section, which covers and protects the dome of the valve, has a broad flange extending around the bottom of the same, thereby giving it a good foundation to rest upon and prevent settling; the hub or upper part of this base has two inwardly projecting lugs.

On the lower end of the middle section, are locking rings which incline each way to slot openings therein, and which are wide enough to allow the locking rings passing by the lugs on each side of the hub. By setting the middle section or pipe in the hub of the base, and turning it either way, the two sections become locked together as though in one casting.

The value of these cast iron boxes will at once suggest itself to all water works and gas companies which have been subjected to the constant expense and annoyance of replacing boxes after a short use, and which have become worthless or rotted out, and therefore dangerous to travel over them.

For any change of street grade or repaving, our Iron Box can be used again and readjusted up or down to conform to change of grade.

We have on hand, and will supply any lengths required, the different sizes extending from two feet to eight feet in length, and suitable for valves up to thirty-six inches; the inside diameter of these upright shafts or pipes, is five inches or seven inches as required.

All of our Boxes are coated with coal tar inside and outside to protect from rust, etc.

This box has been thoroughly tested and adopted by most of the large cities, and is acknowledged to be the Best in Use.

SERVICE BOXES FOR GAS AND WATER.

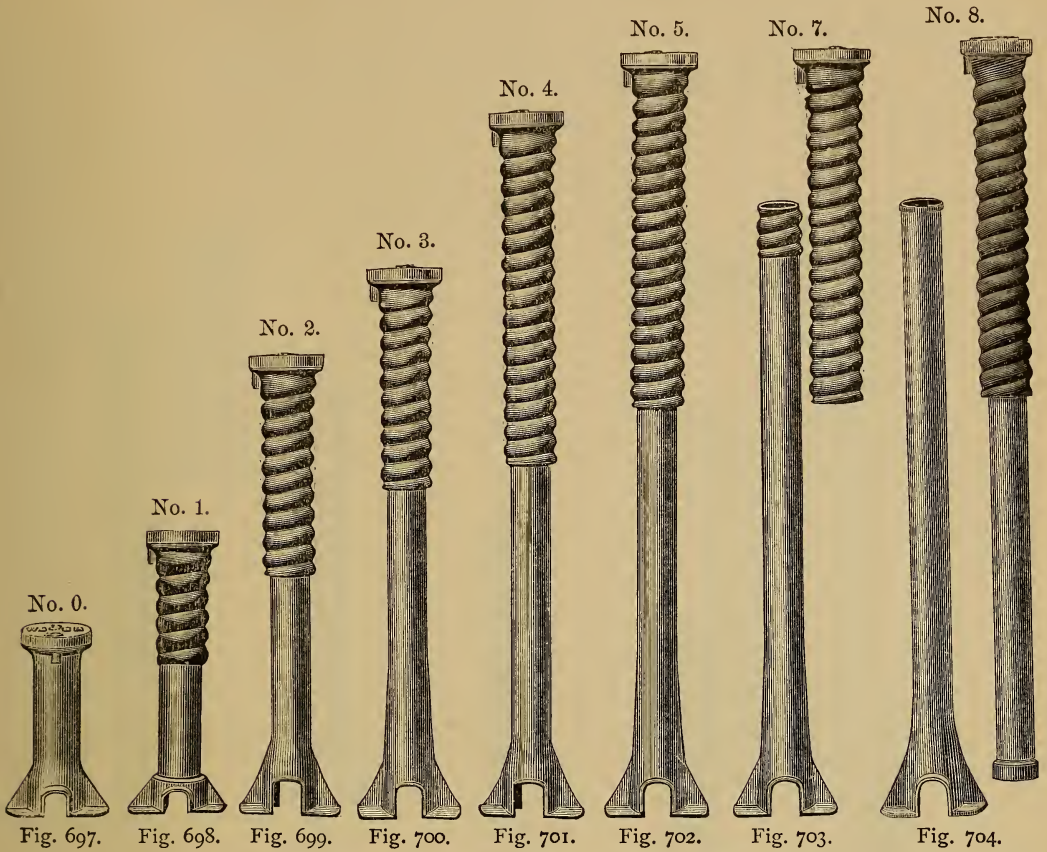


Fig. 697, Stationary length, 10 inches; diameter, inside, in smallest part,  $3\frac{1}{2}$  inch, each.. .90  
 Fig. 698, 13 inches to  $21\frac{1}{2}$  inches, each..... 1.15  
 Fig. 699, 2 feet to 3 feet 3 inches, each... . 1.40  
 Fig. 700, 2 feet 7 inches to 3 feet 11 inches, each 1.50

Fig. 701, 2 feet 9 inches to 4 feet 10 inches, each 1.65  
 Fig. 702, 3 feet 6 inches to 5 feet 6 inches, each 1.75  
 Fig. 703, 4 feet 1 inch to 6 feet 2 inches, each. 1.90  
 Fig. 704, 6 feet 2 inches to 8 feet 2 inches, each 2.50

No. 14 Extension Section, or Enlarged Base.

This extra section is used in connection with any of our regular sizes of service boxes. The shaft above the bell is about the same diameter outside as the inside lower part of the service box, and is made slightly tapering so that it will telescope, or set inside the base of the service box about four inches, thus closing up the smaller side openings of regular service box, and gives a base having openings  $1\frac{1}{8}$  inches larger than regular size.



Price, Fig. 705 each..... .40  
 Fig. 706. Extension Section for increasing length of boxes two feet.  
 Price, each..... .55

No. 15.



Key for Opening Cover.



Cover for Water Service.



Price, Fig. 708, each..... .25

Cover for Gas Service.

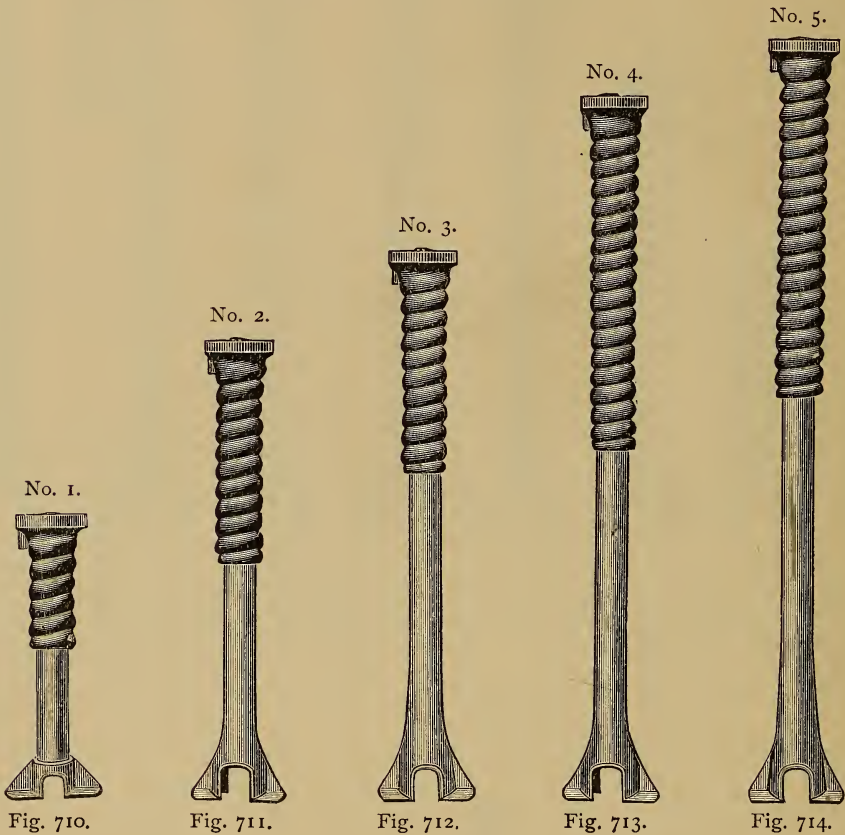


Price, Fig. 709, each... .25



## SERVICE BOXES FOR GAS AND WATER.

2 inch Inside Diameter.



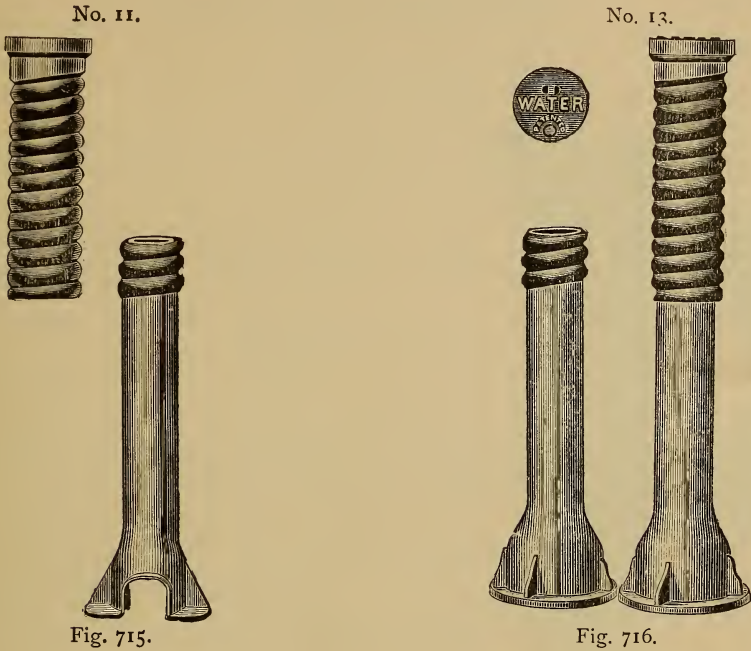
|                  | No. 1            | No. 2               | No. 3               | No. 4                       | No. 5                      |
|------------------|------------------|---------------------|---------------------|-----------------------------|----------------------------|
| Extending.....   | 13 in. to 21½ in | 2 ft. to 3 ft. 3 in | 2 ft. 8 in. to 4 ft | 2 ft. 10 in. to 4 ft. 10 in | 3 ft. 6 in. to 5 ft. 6 in. |
| Price, each..... | 1.00             | 1.25                | 1.35                | 1.50                        | 1.60                       |

Add for rod, each, net, 25 cents.

This Box is designed for cities where a rod box is required and for this purpose is the best Box made. It weighs only about one-half as much as the regular Boxes and for this reason is preferred by some on account of freight. While we recommend the use of our regular Box this one will be found to give just as good satisfaction. The only difference being in the diameter.

LARGE SERVICE AND SMALL VALVE OR DRIP BOXES.

Double Thick Metal and Extra Large Diameter for 3 inch Valves, and Large Services.



These Boxes are made strong enough to use in streets outside of the curbstone, and allow heavy travel passing over them without injury. They are especially desirable for placing over valves for elevators at the curb or in the street as they can be opened so easily.

Inside diameter of upright shaft  $4\frac{1}{4}$  inches at smallest part.  
Inside diameter of lower section, No. 11, at the bottom  $5\frac{1}{4}$  inches.  
Inside diameter of lower section, No. 13, at the bottom  $7\frac{1}{2}$  inches.  
Covers  $6\frac{1}{2}$  inches diameter, are secured with a brass bolt sunk flush in same manner as smaller service boxes.

Fig. 715 intended for large services.  
Fig. 716 intended for small valves or drip-pipe.

|                                                           |                                 |      |
|-----------------------------------------------------------|---------------------------------|------|
| Price, Fig. 715, extending 2 ft.                          | to 3 ft. 4 in.....              | 2.00 |
| " " "                                                     | 2 ft. 11 in. to 4 ft. 2 in..... | 2.75 |
| " " "                                                     | 3 ft. 7 in. to 4 ft. 10 in..... | 3.25 |
| " " "                                                     | 3 ft. 7 in. to 5 ft. 10 in..... | 3.75 |
| Price, Fig. 716, extending 2 ft. 1 in. to 3 ft. 5 in..... |                                 | 2.25 |
| " " "                                                     | 2 ft. 9 in. to 4 ft. ....       | 3.00 |
| " " "                                                     | 3 ft. 6 in. to 4 ft. 9 in.....  | 3.50 |
| " " "                                                     | 3 ft. 6 in. to 5 ft. 8 in.....  | 4.00 |

## VALVE BOXES.

### EXTENSION VALVE BOX.

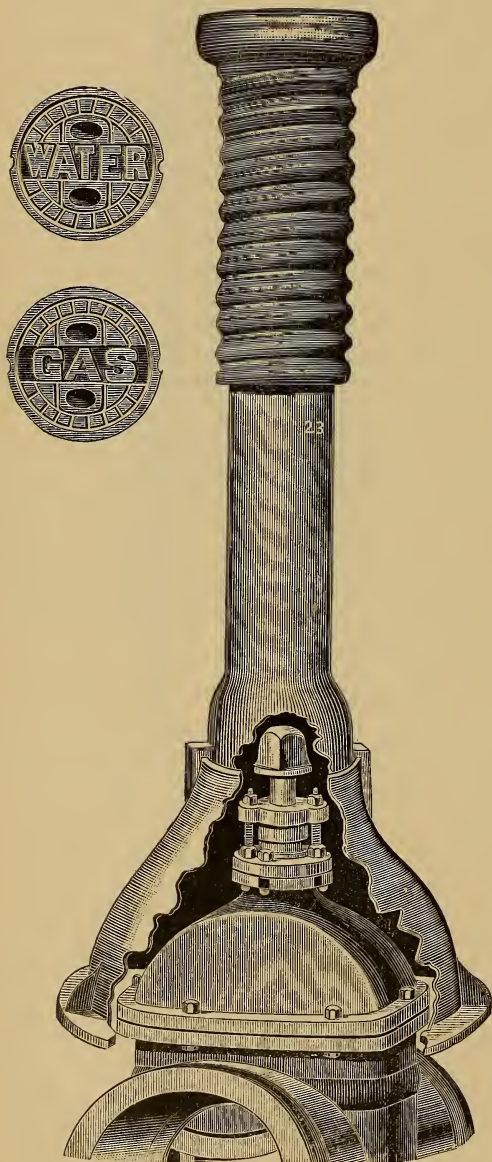


Fig. 717.

#### DIRECTIONS FOR SETTING VALVE BOX.

When setting a valve box in its place, the base should rest two or more inches above the flanged joints of the valve dome. The nut of valve should be about on a line with the hub or upper part of the valve box base where connected with the upright shaft; this will leave ample space all around the valve and prevent the box from touching it in any way.

We recommend the use of a large size base over valves. In many places our No. 4 or No. 6 base is used on 16 in. valves and under; when such is the case the valves are covered by earth to within 12 inches of the top of the nut, the base of valve box completely protecting the working parts of the valve.

#### LENGTH OF VALVE BOX.

It is unnecessary to have the valve box quite as long as the depth of the main pipe, as the base of the box does not extend below the flange joint of valve dome, which is from 3 to 6 in. above the pipe.



## PRICE LIST OF EXTENSION VALVE BOXES.

|                                                                                                        |      |
|--------------------------------------------------------------------------------------------------------|------|
| A. 5 in. upright shaft, valve box extends from 2 ft. 4 in. up to 3 ft. 1½ in., with No. 6 oval base... | 4.50 |
| B. 5 in. " " " " " " 2 ft. 11½ in. up to 3 ft. 9½ in. " 6 " "                                          | 5.00 |
| C. 5 in. " " " " " " 3 ft. 5 in. up to 4 ft. 3 in. " 6 " "                                             | 5.25 |
| D. 5 in. " " " " " " 3 ft. 5 in. up to 5 ft. 3 in. " 6 " "                                             | 5.75 |
| E. 5 in. " " " " " " 5 ft. 1½ in. up to 5 ft. 11 in. " 6 " "                                           | 6.00 |
| F. 5 in. " " " " " " 5 ft. 1½ in. up to 6 ft. 11 in. " 6 " "                                           | 6.50 |
| G. 5 in. " " " " " " 6 ft. 1½ in. up to 6 ft. 11 in. " 6 " "                                           | 6.50 |
| H. 5 in. " " " " " " 6 ft. 1½ in. up to 7 ft. 11 in. " 6 " "                                           | 7.00 |
| I. 7 in. " " " " " " 2 ft. 3 in. up to 3 ft. 2½ in. " 6 " "                                            | 5.50 |
| J. 7 in. " " " " " " 2 ft. 9 in. up to 3 ft. 8½ in. " 6 " "                                            | 6.00 |
| K. 7 in. " " " " " " 3 ft. 3 in. up to 4 ft. 2½ in. " 6 " "                                            | 6.25 |
| L. 7 in. " " " " " " 3 ft. 3 in. up to 5 ft. 2½ in. " 6 " "                                            | 7.50 |
| M. 7 in. " " " " " " 4 ft. 10½ in. up to 5 ft. 10 in. " 6 " "                                          | 7.50 |
| N. 7 in. " " " " " " 4 ft. 10½ in. up to 6 ft. 10 in. " 6 " "                                          | 8.75 |
| O. 7 in. " " " " " " 6 ft. 1¾ in. up to 7 ft. 1 in. " 6 " "                                            | 8.50 |
| P. 7 in. " " " " " " 6 ft. 1¾ in. up to 8 ft. ½ in. " 6 " "                                            | 9.75 |

Base No. 6 is used as a standard for quoting lengths and prices. When any other size base is required the length of valve box and price of same is reduced or increased in accordance with the size desired.

## ROUND BASES.

## For Valve Boxes.

No. 4 Round Base, for 4 in. valves or smaller sizes, reduces price of valve box 35 cents.

Dimensions inside: diameter at bottom 10½ in., height 8½ in.

With this base valve box will be 3 in. shorter than with No. 6 base.

No. 6 Round Base, for 6 in. round valves or smaller sizes.

This is the standard size, used in quoting lengths and prices.

Dimensions inside: diameter at bottom 14⅜ in., height 11¼ in.

No. 8 Round Base, for 8 in. round valves or smaller sizes, increases price of valve box 25 cents.

Dimensions inside: diameter at bottom 17¼ in., height 11¼ in.

With this base the valve box is the same length as with No. 6 base.

No. 16 Round Base, for 12 or 16 in. round valves, increases price of valve box \$1.25.

Dimensions inside: diameter at bottom 24 in., height 15½ in.

With this base the valve box is 4⅜ in. longer than with No. 6 base.

## OVAL BASES.

## For Valve Boxes.

No. 4 Round Base, described above, is used with either oval or round valve.

No. 6 Oval Base, for 8 in. oval valves or smaller sizes.

This is the standard size used in quoting lengths and prices.

Dimensions inside: diameter at bottom 15 in. x 11½ in., height 11½ in.

No. 12 Oval Base, for 16 in. oval valves or smaller sizes, increases price of valve box 35 cents.

Dimensions inside: diameter at bottom 19⅝ x 11¼ in., height 12⅜ in.

With this base the valve box is 1¼ in. longer than with No. 6 base.

No. 20 Oval Base, for 24 in. oval valves or smaller sizes, increases price of valve box \$1.25.

Dimensions inside: diameter at bottom 23 x 14¼ in., height 15⅜ in.

With this base the valve box is 4¼ in. longer than with No. 6 base.

No. 24 Oval Base, for 36 in. oval valves or smaller sizes, increases price of valve box \$3.50.

Dimensions inside: diameter at bottom 29 x 17 in., height 23½ in.

With this base the valve box is 12⅜ in. longer than with No. 6 base.

All of our bases are adapted to be used with either 5 in. or 7 in. upright shaft.

When sending orders give the letter of valve box and size of base required, as per catalogue.

## MUELLER'S Machine for Tapping Water and Gas Mains

### WHILE UNDER PRESSURE.

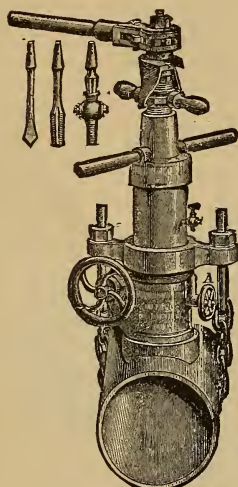


Fig. 718.

Any main can be tapped while under pressure, without losing any water or gas, except what is contained in the cylinder of the machine which will go out only when the tapping is done and machine taken off the main. The machine, weighing only fifty pounds, can be easily transported, and one man of ordinary intelligence can *tap a main in fifteen minutes*. Its simplicity and practicability recommend it at once to every one interested in gas or water works.

Each machine for water mains is furnished with one of each,  $\frac{1}{2}$ ,  $\frac{5}{8}$ ,  $\frac{3}{4}$  and 1 inch Drills, Taps and Plugs for Corporation Cocks, Chain and Wrench; also four Gaskets, 4, 6, 10 and 12 inch, will be sent, unless otherwise ordered.

Each Machine for Gas Mains is furnished with three iron saddles, one each, Tap and Drill combined,  $\frac{3}{4}$ , 1 and  $1\frac{1}{4}$  inch; one each, Socket Wrench for  $\frac{3}{4}$ , 1 and  $1\frac{1}{4}$  inch Pipe.

In ordering Tapping Machine, please state diameter of pipes used in your city.

|                                   |        |
|-----------------------------------|--------|
| Price, for Water Mains, each..... | 100.00 |
| Price, for Gas Mains, each .....  | 62.00  |

## MUELLER'S Improved Automatic Water Pressure Regulator.

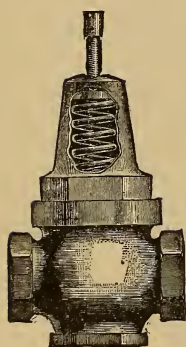


Fig. 719.

This Regulator can be set at any pressure desired in a building, and it will maintain the same, regardless of the highest pressure in the street main.

We absolutely guarantee this Regulator to maintain a uniform pressure in buildings, regardless of the pressure in the mains, such as is produced where the Holly system, or heavy or unsteady pressure is had from Stand-pipe or Reservoir systems.

Using the Regulator, we guarantee a steady and uniform pressure, without any jar to the pipes or any noise usually called "Water Hammer."

Any pressure may be secured that is desired, not exceeding the pressure in the mains, but may be of any less pressure.

The Regulator is simple of construction, and not liable to get out of order, and by attaching it, lighter pipes may be used and more than the expense of the Regulator saved.

No splashing of water from too heavy a pressure; no bursting of pipes or boilers, caused by excessive pressure or defective plumbing.

A pressure of 20 to 30 pounds, as may be desired, can be maintained in any building, notwithstanding a fire pressure of 120 pounds or more on the mains.

By using this Regulator, an effective pressure for fire purposes is obtained sooner, as the house supply pipes are not filled to a fire pressure.

A Relief Valve is provided for expansion of hot water where a boiler is used, so that at no time there need be more than 20 to 30 pounds, or the amount of pressure desired in the house supply pipes. Every Regulator warranted.

|                                               |       |
|-----------------------------------------------|-------|
| Price, for $\frac{3}{4}$ inch Pipe, each..... | 10.00 |
| Price, for 1 inch Pipe, each.....             | 13.00 |

# THE GEM WATER MOTOR AND HYDRAULIC PUMPING ENGINE.

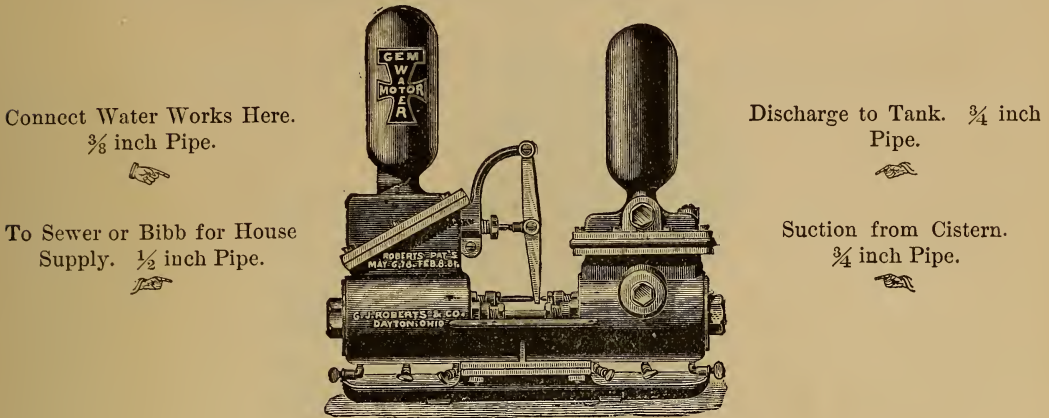


Fig. 720.

This Motor is especially designed to take the place of the ordinary hand force-pump in residences where cistern water is preferable to the public water supply, for the Bath, Kitchen, or any other use for which it may be desired.

The Motor consists of two cylinders connected together, one a perfect water engine, the other a double acting force pump operated by the former. It is automatic, noiseless and positive, and altogether combines symmetry, strength and utility in the highest degree. For indoor use it cannot be equaled by any other pump in the market.

All parts are interchangeable and made in the best manner—with special tools for their manufacture—and every Motor is subjected to the most severe tests before they leave our factory. The entire working machine is made of bronze, including the cylinders, pistons, cylinder heads, piston rod, valve rod, valves and stuffing boxes and provision is made for thoroughly draining every part to prevent freezing.

## DIRECTIONS FOR CONNECTING.

The Motor is usually placed above the kitchen sink on the drip-pan and brackets provided for that purpose, and the family supply drawn through it. Connect the motor at the  $\frac{3}{8}$  inch hole on the engine end with the city supply. The  $\frac{1}{2}$  inch hole is the exhaust; this pipe may be continued and the house supply drawn from it, or, a bibb-cock can be put on the end at the sink, for kitchen use. Whenever a valve or faucet in this pipe is opened, the motor works, and pumps from the cistern into the tank above, an amount equal to that drawn from the water works. When the pipes are closed the motor stops and there is no possible leakage.

The lower holes in the pump end are for the suction, one of which connects with the cistern. The upper holes are for the discharge, one of which connects with the tank above. The Tank should, in all cases, have an overflow back into the cistern.

We make three sizes of Power Cylinders to suit various water pressures:

|        |                    |                                    |                                                    |          |       |
|--------|--------------------|------------------------------------|----------------------------------------------------|----------|-------|
| No. 1. | $2\frac{1}{2}$ in. | Power Cylinder, $2\frac{1}{2}$ in. | Pump Cylinder, for 40 to 50 lb. pressure and over, | Price... | 40.00 |
| No. 2. | $3\frac{1}{2}$ in. | "                                  | "                                                  | "        | 45.00 |
| No. 3. | 4 in.              | "                                  | "                                                  | "        | 50.00 |

For No. 1. It is a safe rule to calculate each pound pressure will raise the water one foot from the cistern.

For No. 2. Calculate one pound pressure will raise the water from the cistern from one and a half to two feet high, except in very low pressure. (See table.)

For No. 3. One pound pressure will raise the water from two to three feet.

## Table of Heights Different Pressures Will Raise.

| No. 1 with 20 lbs. pressure on Power Cylinder will lift and force |   |   |    |   |   | 20 ft. high from cistern. |     |   |
|-------------------------------------------------------------------|---|---|----|---|---|---------------------------|-----|---|
| "                                                                 | 1 | " | 25 | " | " | "                         | 30  | " |
| "                                                                 | 1 | " | 30 | " | " | "                         | 35  | " |
| "                                                                 | 1 | " | 35 | " | " | "                         | 40  | " |
| "                                                                 | 1 | " | 40 | " | " | "                         | 50  | " |
| "                                                                 | 1 | " | 50 | " | " | "                         | 70  | " |
| "                                                                 | 2 | " | 15 | " | " | "                         | 20  | " |
| "                                                                 | 2 | " | 20 | " | " | "                         | 40  | " |
| "                                                                 | 2 | " | 25 | " | " | "                         | 50  | " |
| "                                                                 | 2 | " | 30 | " | " | "                         | 70  | " |
| "                                                                 | 2 | " | 35 | " | " | "                         | 80  | " |
| "                                                                 | 2 | " | 40 | " | " | "                         | 100 | " |
| "                                                                 | 3 | " | 10 | " | " | "                         | 30  | " |
| "                                                                 | 3 | " | 12 | " | " | "                         | 40  | " |
| "                                                                 | 3 | " | 15 | " | " | "                         | 50  | " |
| "                                                                 | 3 | " | 20 | " | " | "                         | 70  | " |



EYSTER IMPROVED WATER MOTOR.

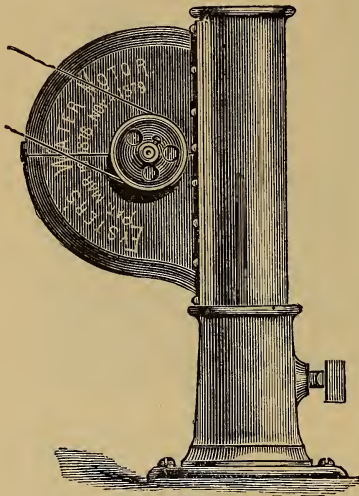


Fig. 721.

|               |                             |        |
|---------------|-----------------------------|--------|
| Price, No. 1. | Diameter of Wheel, 7 inches | 15.00  |
| " " 2.        | " " 12 "                    | 21.00  |
| " " 3.        | " " 18 "                    | 65.00  |
| " " 4.        | " " 24 "                    | 100.00 |
| " " 5.        | " " 30 "                    | 150.00 |
| " " 6.        | " " 48 "                    | 300.00 |

TABLE SHOWING POWER GAINED BY THE MOTOR UNDER PRESSURE OF 30 TO 100 POUNDS.

First Figure in Column gives Estimated Horse Power at 30 Pounds, and Second Figures give Estimated Horse Power at 100 Pounds.

| Number of Motor.....   | 1            | 2            | 3            | 4            | 5            | 6            |
|------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
|                        | Horse Power. | Horse Power. | Horse Power. | Horse Power. | Horse Power. | Horse Power. |
| Two ¼ in. Nozzles..... | ⅛ to ⅞       | ¼ to 1½      | ¾ to 2½      | ½ to 3¼      | ⅝ to 4       | ¾ to 5       |
| " ⅜ " " .....          | ⅓ to 2½      | ⅔ to 4       | 1 to 6       | 1⅓ to 8      | 1⅔ to 10     | 2 to 12      |
| " ½ " " .....          | ½ to 3½      | 1¼ to 7½     | 1½ to 11     | 2 to 15      | 3 to 19      | 3½ to 23     |
| " ⅝ " " .....          | 1 to 6       | 2 to 12      | 3 to 19      | 4 to 25      | 5 to 31      | 6 to 38      |

DISCHARGE IN GALLONS, PER MINUTE.

| Pounds Pressure .....  | 30       | 40       | 50       | 60       | 70       | 80       | 90       | 100      |
|------------------------|----------|----------|----------|----------|----------|----------|----------|----------|
|                        | Gallons. | Gallons. | Gallons. | Gallons. | Gallons. | Gallons. | Gallons. | Gallons. |
| Two ¼ in. Nozzles..... | 12       | 13       | 15       | 17       | 18       | 20       | 21       | 22       |
| " ⅜ " " .....          | 39       | 34       | 38       | 42       | 45       | 48       | 51       | 54       |
| " ½ " " .....          | 55       | 63       | 71       | 78       | 84       | 90       | 95       | 101      |
| " ⅝ " " .....          | 88       | 102      | 114      | 125      | 135      | 145      | 153      | 162      |

The best Motor made. Can be seen in operation at our store where a No. 5 Motor, with two ¼ inch nozzles, using 15 gallons of water per minute, is running a 2 inch Pipe machine Every Motor guaranteed to give satisfaction. Run Sewing Machines perfectly, and at an expense of only about One Dollar per year. It is the most economical power known where the water pressure is over twenty-five pounds.

# CROCKER'S

## Reversible Self-Packing and Self-Condensing Filter.

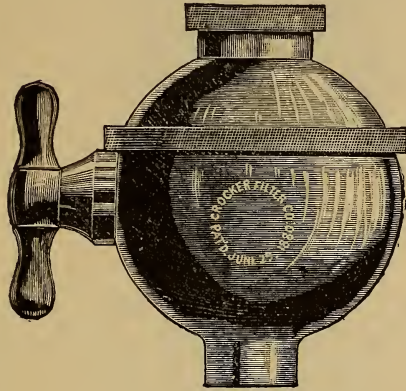


Fig. 722.

This Filter provides for filtering all the water intended to be filtered, by passing it through two fine metal strainers and a body of fine animal charcoal (the best filtering material known), and differs from any other reversible or revolving Filter which has ever been put on the market, in the following essential particulars: First, in the manner of its packing; second, in the manner of holding the ball containing the filtering material; third, in its self-packing stem or handle; fourth, in the construction of the strainers and the manner of putting them into the ball, and fifth, in the provision for a free passage of the water without filtering, when desired; and is unquestionably, and according to the judgment of expert mechanics, the best Filter which has yet been produced in this or any other country.

### DIRECTIONS FOR USE AND CLEANSING.

For *filtering water*, place the handle *horizontally*.

For a full and free supply of water *without filtration*, place the handle in a *perpendicular* position.

For *cleansing the filter*, shut off the supply of water, reverse the ball inside by turning the handle, then let on the water again, and in half a minute the water will run clear and be fit for use. If you want to examine what is removed from the water by the Filter, catch the first glass of water which comes from it after reversing the ball.

*The ball should be reversed from three to six times a day.*

If the Filter should, by neglect, become filled with impurities, reverse several times, letting on the water each time, running it a few moments; it will soon become free and clean again. Repack with fresh bone charcoal once in six months.

### PRICE LIST.

#### DOMESTIC FILTER.

|                                                                         |       |
|-------------------------------------------------------------------------|-------|
| Price, No. 0, to attach to $\frac{3}{4}$ inch Hose Bibb Cock, each..... | 1.50  |
| “ “ 0, with Pipe attachment, for Swinging Faucets, each.....            | 2.00  |
| “ “ 1, to attach to $\frac{3}{4}$ inch Hose Bibb Cock, each.....        | 2.50  |
| “ “ 2, “ “ “ “ “ “ “ “ .....                                            | 4.00  |
| “ “ 3, “ “ “ “ “ “ “ “ .....                                            | 10.00 |

#### MANUFACTURERS' FILTER.

|                                                                       |        |
|-----------------------------------------------------------------------|--------|
| Price, No. 4, 10 inches diameter, $\frac{3}{4}$ inch inlet, each..... | 60.00  |
| “ “ 5, 18 “ “ 2 “ “ “ .....                                           | 150.00 |
| “ “ 6, 24 “ “ 3 “ “ “ .....                                           | 250.00 |
| “ “ 7, 30 “ “ 4 “ “ “ .....                                           | 400.00 |
| “ “ 8, 48 “ “ 6 “ “ “ .....                                           | 600.00 |

Larger Sizes made to order.

Warranted never to become inoperative.

ECLIPSE HOT AND FOUL AIR EXHAUSTER AND VENTILATOR.



Fig. 723.

|                          |      |                           |       |                           |        |
|--------------------------|------|---------------------------|-------|---------------------------|--------|
| Price, 2 inch, each..... | 1.00 | Price, 10 inch, each..... | 5.75  | Price, 24 inch, each..... | 40.00  |
| “ 3 “ “ .....            | 1.50 | “ 12 “ “ .....            | 6.75  | “ 30 “ “ .....            | 65.00  |
| “ 4 “ “ .....            | 1.75 | “ 14 “ “ .....            | 13.00 | “ 36 “ “ .....            | 90.00  |
| “ 5 “ “ .....            | 2.50 | “ 16 “ “ .....            | 20.00 | “ 40 “ “ .....            | 120.00 |
| “ 6 “ “ .....            | 3.40 | “ 18 “ “ .....            | 27.00 | “ 48 “ “ .....            | 145.00 |
| “ 7 “ “ .....            | 4.00 | “ 20 “ “ .....            | 33.00 | “ 60 “ “ .....            | 225.00 |
| “ 8 “ “ .....            | 4.65 |                           |       |                           |        |

The Eclipse Ventilator is constructed on strictly scientific principles, combining simplicity with the best possible effect. It is stationary, durable, and does not get out of order. It is storm-proof, and is specially adapted for Ventilating Water Closets and Soil Pipes. It makes an excellent Chimney Cap. Every Ventilator is guaranteed and we recommend the Eclipse as the best Ventilator in use.

GLOBE VENTILATOR.



Fig. 724.

CAPACITY AND PRICE LIST.

Getting the number of square inches in your Chimney Flue, you can decide what size Ventilator to order by this table.

| Size.   | Capacity. | Price. | Size.    | Capacity. | Price. |
|---------|-----------|--------|----------|-----------|--------|
| 2 inch. | 4 inch.   | 1.00   | 16 inch. | 192 inch. | 20.00  |
| 3 “     | 7 “       | 1.50   | 18 “     | 232 “     | 27.00  |
| 4 “     | 12 “      | 1.75   | 20 “     | 300 “     | 33.00  |
| 5 “     | 19 “      | 2.50   | 24 “     | 432 “     | 40.00  |
| 6 “     | 27 “      | 3.40   | 30 “     | 675 “     | 65.00  |
| 7 “     | 37 “      | 4.00   | 36 “     | 972 “     | 120.00 |
| 8 “     | 48 “      | 4.65   | 40 “     | 1200 “    | 180.00 |
| 10 “    | 75 “      | 5.75   | 48 “     | 1728 “    | 240.00 |
| 12 “    | 108 “     | 6.75   | 60 “     | 2750 “    | 360.00 |
| 14 “    | 147 “     | 13.00  |          |           |        |



## HOSE REELS.

### THE SUCCESS HOSE REEL.

Strong, Light, Handsome, Cheap, Simple, Salable.

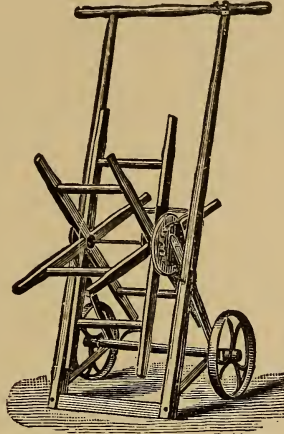


Fig. 725.

|                                                             |      |
|-------------------------------------------------------------|------|
| No. 1 carries 100 feet, $\frac{3}{4}$ inch Hose, price..... | 2.50 |
| No. 2 carries 200 feet, $\frac{3}{4}$ inch Hose, price..... | 3.40 |

This is the best cheap Hose Reel. It has wrought iron braces, iron bearings, and as the most important feature, *has six supports or rounds*, which keep the Hose in circular form and prevent its cracking, as occurs when wound upon four arms or hung on a peg.

This has ratchet for Reel, nozzle loops, etc., the same as the Holly. The iron work is japanned, the wood work is oiled and varnished. The Reel is substantial, neat and cheap.

### THE IMPROVED HOLLY HOSE REEL.

Useful, Light, Beautiful, Strong.

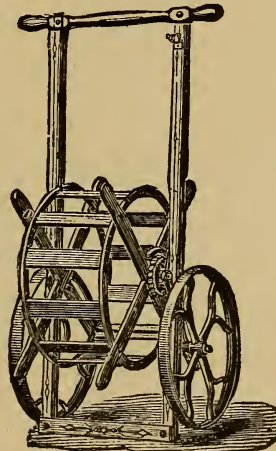


Fig. 726.

|                                                              |      |
|--------------------------------------------------------------|------|
| No. 1 carries 100 feet, $\frac{3}{4}$ inch Hose, price. .... | 5.00 |
| No. 2 carries 200 feet, $\frac{3}{4}$ inch Hose, price.....  | 6.00 |
| No. 3 carries 300 feet, $\frac{3}{4}$ inch Hose, price.....  | 8.00 |

This is the best Drum Reel offered by any one. The open drum allows the Hose to dry, and does not get dented or knocked out of shape. The castings are nicely japanned; the wood work is painted in three colors and striped, and the parts are all bolted together in the most substantial manner.

If you want an ornamental Reel for your lawn, be sure and buy the Holly.

RUBBER HOSE.

The Two Ply, or conducting, is not calculated to stand much pressure.

The Three Ply, for Hydrants, etc., is made to stand a pressure of 75 pounds to the square inch.

The Four Ply (used for Locomotives and for Leading Hose for Force Pumps, Fire Engines, and other purposes), is made to stand a pressure of 150 pounds to the square inch.

Hose made specially to order for Steam Fire Engines and Steam Pumps (where unusual strength is required), to stand a pressure of 400 pounds to the square inch.

It is furnished in lengths of 50 feet or less, and of *any size or strength required*, suitable for Hand and Steam Fire Engines, Force Pumps, Hydrants, and conducting fluids generally.

The sizes indicated in the list are the inside diameters, and each size will fully measure what it is marked.

CONDUCTING HOSE.

| Two Ply.      |           |                 |           |
|---------------|-----------|-----------------|-----------|
| Int. diam.    | Per foot. | Int. diam.      | Per foot. |
| 1/2 inch..... | .20       | 2 3/4 inch..... | .92       |
| 3/4 ".....    | .25       | 3 ".....        | .99       |
| 1 ".....      | .33       | 4 ".....        | 1.32      |
| 1 1/4 ".....  | .42       | 5 ".....        | 1.65      |
| 1 1/2 ".....  | .50       | 6 ".....        | 1.98      |
| 1 3/4 ".....  | .58       | 7 ".....        | 2.31      |
| 2 ".....      | .66       | 8 ".....        | 2.64      |
| 2 1/4 ".....  | .75       | 9 ".....        | 2.97      |
| 2 1/2 ".....  | .83       | 10 ".....       | 3.33      |

HYDRANT HOSE.

| Three Ply.    |           |              |           |
|---------------|-----------|--------------|-----------|
| Int. diam.    | Per foot. | Int. diam.   | Per foot. |
| 1/2 inch..... | .25       | 2 inch.....  | .80       |
| 3/4 ".....    | .30       | 2 1/4 "..... | .90       |
| 1 ".....      | .40       | 2 1/2 "..... | 1.00      |
| 1 1/4 ".....  | .50       | 2 3/4 "..... | 1.10      |
| 1 1/2 ".....  | .60       | 3 ".....     | 1.20      |
| 1 3/4 ".....  | .70       | 3 1/2 "..... | 1.40      |
|               |           | 4 ".....     | 1.60      |

ENGINE HOSE.

| Four Ply.     |           |              |           |
|---------------|-----------|--------------|-----------|
| Int. diam.    | Per foot. | Int. diam.   | Per foot. |
| 1/2 inch..... | .30       | 2 inch.....  | 1.00      |
| 3/4 ".....    | .37       | 2 1/4 "..... | 1.12      |
| 1 ".....      | .50       | 2 1/2 "..... | 1.25      |
| 1 1/4 ".....  | .62       | 2 3/4 "..... | 1.37      |
| 1 1/2 ".....  | .75       | 3 ".....     | 1.50      |
| 1 3/4 ".....  | .87       | 4 ".....     | 2.00      |

Five Ply Hose made to order, at an advance of 25 per cent. on the price of Four Ply.

STEAM PACKING.

Rubber Steam Packing, in its various forms and applications, is now an indispensable article to the engineer. It keeps his steam machinery and fixtures in proper working condition. It possesses great elasticity, and will stand 300° of heat. It is supplied in every possible form, to meet the requirements of Engineers and Machinists.

Steam Packing, Cloth Insertion.

Cloth on One or Both Sides.

| Thickness.     | Per lb., One Ply. | Per lb., Two Ply. | Per lb., Three Ply. | Per lb., Four Ply. |
|----------------|-------------------|-------------------|---------------------|--------------------|
| 1-64 inch..... | 70 cents          | .....             | .....               | .....              |
| 1-32 ".....    | 65 "              | .....             | .....               | .....              |
| 1-16 ".....    | 60 "              | 63 cents          | 66 cents            | .....              |
| 3-32 ".....    | 55 "              | 58 "              | 61 "                | .....              |
| 1-8 ".....     | .....             | 55 "              | 58 "                | 61 cents           |
| 3-16 ".....    | .....             | .....             | 55 "                | 58 "               |
| 1-4 ".....     | .....             | .....             | .....               | 55 "               |

One ply of cloth for every 1-16 inch thickness.

Three cents additional per pound will be charged for each extra ply of cloth.

Piston Packing, Round and Square, per pound..... .85

## BAR SOLDER.



Fig. 727.

## Block Solder.



Fig. 728.

## Pig Tin.



Fig. 729.

## LIST OF SIZES AND WEIGHTS OF LEAD PIPE.

| CALIBER.                         | WEIGHT<br>PER FOOT. | CALIBER.                           | WEIGHT<br>PER FOOT. | CALIBER.                       | WEIGHT<br>PER FOOT. |
|----------------------------------|---------------------|------------------------------------|---------------------|--------------------------------|---------------------|
|                                  | Lbs. Oz.            |                                    | Lbs. Oz.            |                                | Lbs. Oz.            |
| $\frac{1}{4}$ inch Tubing.....   | 6                   | $\frac{7}{8}$ inch Aqueduct.....   | 1 8                 | 2 inch Waste.....              | 3                   |
| Fish Seine.....                  | 15                  | Ex. Light.....                     | 2                   | Ex. Light.....                 | 4                   |
| $\frac{3}{8}$ inch Aqueduct..... | 8                   | Light.....                         | 2 8                 | Light.....                     | 5                   |
| Ex. Light.....                   | 9                   | 1 inch Aqueduct.....               | 1 8                 | Medium.....                    | 7                   |
| Light.....                       | 12                  | Ex. Light.....                     | 2                   | Strong.....                    | 8                   |
| Medium.....                      | 1                   | Light.....                         | 2 8                 | Ex. Strong.....                | 9                   |
| Strong.....                      | 1 8                 | Medium.....                        | 3 4                 | Ex. ex. Strong..               | 10 8                |
| Ex. Strong.....                  | 2                   | Strong.....                        | 4                   | $2\frac{1}{2}$ inch Waste..... | 4                   |
| $\frac{1}{2}$ inch Aqueduct..... | 10                  | Ex. Strong.....                    | 4 12                | Light.....                     | 6                   |
| Ex. Light.....                   | 12                  | Ex. ex. Strong..                   | 5 8                 | 3-16 thick.....                | 8                   |
| Light.....                       | 1                   | $1\frac{1}{4}$ inch Aqueduct.....  | 2                   | $\frac{1}{4}$ thick.....       | 11                  |
| Medium.....                      | 1 4                 | Ex. Light.....                     | 2 8                 | 5-16 thick.....                | 14                  |
| Strong.....                      | 1 12                | Light.....                         | 3                   | $\frac{3}{8}$ thick.....       | 17                  |
| AA.....                          | 2                   | Medium.....                        | 3 12                | 3 inch Waste.....              | 3                   |
| Ex. Strong.....                  | 2 8                 | Strong.....                        | 4 12                | Light.....                     | 5                   |
| Ex. ex. Strong..                 | 3                   | Ex. Strong.....                    | 6                   | 3 16 thick.....                | 9                   |
| $\frac{5}{8}$ inch Aqueduct..... | 12                  | Ex. ex. Strong..                   | 6 12                | $\frac{1}{2}$ thick.....       | 12                  |
| Ex. Light.....                   | 1 4                 | $1\frac{1}{2}$ inch Aqueduct.....  | 3                   | 5-16 thick.....                | 16                  |
| Light.....                       | 1 12                | Ex. Light.....                     | 3 8                 | $\frac{3}{8}$ thick.....       | 20                  |
| Medium.....                      | 2                   | Light.....                         | 4                   | $3\frac{1}{2}$ inch Waste..... | 5                   |
| Strong.....                      | 2 8                 | Medium.....                        | 5                   | $\frac{1}{2}$ thick.....       | 15                  |
| Ex. Strong.....                  | 3                   | Strong.....                        | 6                   | 5-16 thick.....                |                     |
| Ex. ex. Strong..                 | 3 8                 | Ex. Strong.....                    | 7 8                 | 4 inch Waste.....              | 5                   |
| $\frac{3}{4}$ inch Aqueduct..... | 1                   | Ex. ex. Strong..                   | 9                   | $\frac{1}{4}$ thick.....       | 16                  |
| Ex. Light.....                   | 1 8                 | $1\frac{3}{4}$ inch Ex. Light..... | 3 12                | 5-16 thick.....                | 21                  |
| Light.....                       | 2                   | Light.....                         | 4 8                 | $\frac{3}{8}$ thick.....       | 25                  |
| Medium.....                      | 2 4                 | Medium.....                        | 5 8                 | $4\frac{1}{2}$ inch Waste..... | 6                   |
| Strong.....                      | 3                   | Strong.....                        | 6 8                 | 5 inch Waste.....              | 8                   |
| Ex. Strong.....                  | 3 8                 | Ex. Strong.....                    | 8                   |                                |                     |
| Ex. ex. Strong..                 | 4                   |                                    |                     |                                |                     |

Sheet Lead of following weights, per square foot:  $2\frac{1}{2}$ , 3,  $3\frac{1}{2}$ , 4,  $4\frac{1}{2}$ , 5, 6, 7, 8, 9, 10 lbs. and upward.

Pure Block Tin Pipe of all the usual sizes and weights.



PUMPS.

PITCHER SPOUT PUMPS.

Closed Top.

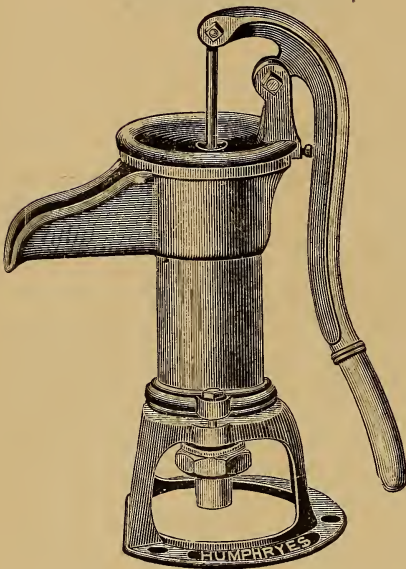


Fig. 730.

Open Top.

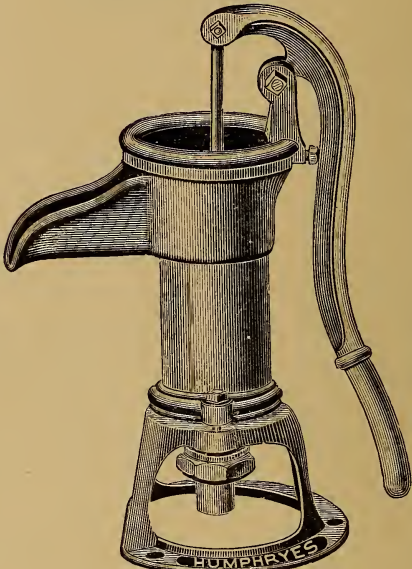


Fig. 731.

Our Pitcher Spout Pumps are all made with Brass Valve Seats, and fitted for Lead or Iron Pipe. The Spout is made so that all the water will drip off and not run down the Pump. They are nicely painted and work easily. They will work perfectly in wells from twenty to twenty-five feet deep and are more extensively used than any other Pump made.

Unless otherwise ordered Close Top Pitcher Pumps are always shipped.

Sizes and Prices, Figs. 730 and 731.

|                                                                                 |      |
|---------------------------------------------------------------------------------|------|
| Price, No. 1, 2½ inch Cylinder, fitted for 1¼ inch Pipe, Iron Cylinder, each .. | 4.25 |
| “ “ 2, 3 “ “ “ “ 1¼ “ “ “ “ “ ..                                                | 4.75 |
| “ “ 3, 3½ “ “ “ “ 1¼ “ “ “ “ “ ..                                               | 5.25 |
| “ “ 4, 4 “ “ “ “ 1¼ “ “ “ “ “ ..                                                | 5.75 |
| “ “ 5, 4½ “ “ “ “ 2 “ “ “ “ “ ..                                                | 6.25 |

Any one of our Pitcher Spout Pumps can be fitted for 1½ or 2 inch Pipe when so wanted.

## REVOLVING TOP CISTERN PUMP.

On Base.



Fig. 732.

With Brackets.

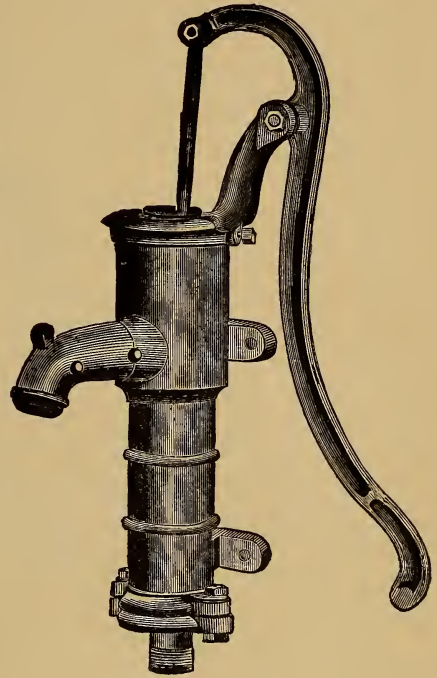


Fig. 733.

The Cistern Pump is still preferred by some to the more commonly used Pitcher Spout Pump. We make them with Brass Valve Seats and cast a lug on the spout to hold bucket. They can be used in wells from twenty to twenty-five feet deep. We always ship Cistern Pumps on Base Iron Cylinder when not otherwise specified.

Sizes and Prices, Figs 732 and 733.

| Number. | Size Cylinder.    | Fitted for          | Price, Iron. | Price, Brass Cylinder. |
|---------|-------------------|---------------------|--------------|------------------------|
| 0       | 2 inch.           | 1 inch pipe.        | 3.50         | 5.50                   |
| 1       | 2 $\frac{1}{4}$ " | 1 " "               | 4.00         | 6.00                   |
| 2       | 2 $\frac{1}{2}$ " | 1 $\frac{1}{4}$ " " | 4.50         | 7.00                   |
| 3       | 2 $\frac{3}{4}$ " | 1 $\frac{1}{4}$ " " | 5.00         | 8.00                   |
| 4       | 3 "               | 1 $\frac{1}{4}$ " " | 5.50         | 10.00                  |
| 5       | 3 $\frac{1}{4}$ " | 1 $\frac{1}{2}$ " " | 6.50         | 13.00                  |
| 6       | 3 $\frac{1}{2}$ " | 2 " "               | 8.00         | 18.00                  |

ANTI-FREEZING WELL PUMP.

With Wrought Iron Set Length.

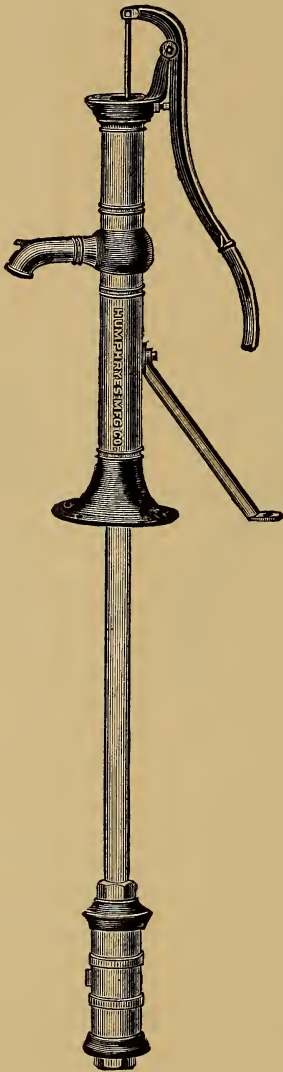


Fig. 734.

|        |        |                                                             |       |
|--------|--------|-------------------------------------------------------------|-------|
| Price, | No. 2, | 2 1/2 x 10 inch Cylinder, fitted for 1 1/4 inch Pipe, each. | 7.50  |
| "      | " 3,   | 2 3/4 x 10 " " " 1 1/4 " " "                                | 8.00  |
| "      | " 4,   | 3 x 10 " " " 1 1/4 " " "                                    | 8.50  |
| "      | " 5,   | 3 1/4 x 10 " " " 1 1/4 " " "                                | 9.00  |
| "      | " 6,   | 3 1/2 x 10 " " " 1 1/4 " " "                                | 10.00 |

This style Pump is used largely in wells from twenty to thirty feet deep. The Cylinder is placed four feet below the base, and hole drilled in Pipe above the Cylinder allowing the water to run out below the freezing point. The Pump is well made and nicely painted. No. 6 can be fitted with 2 inch Pipe and 4 x 12 Cylinder, and makes an excellent Stock or Farm Pump.



## ANTI-FREEZING, TIGHT TOP WELL PUMP.

With Wrought Iron Set Length.

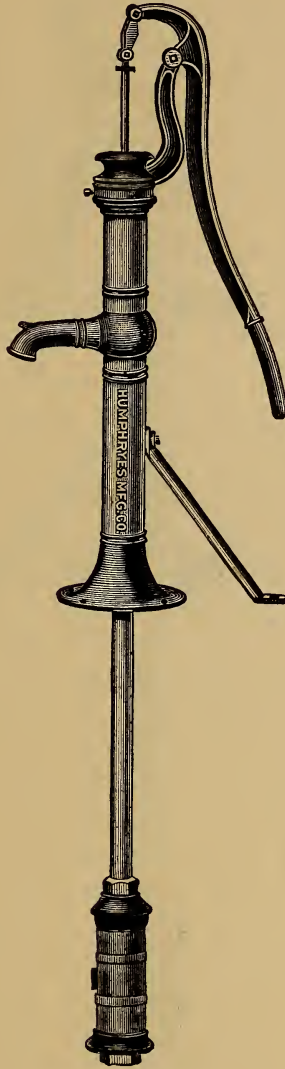


Fig. 735.

|                                                                           |       |
|---------------------------------------------------------------------------|-------|
| Price, No. 2, 2½ x 10 inches, Cylinder fitted for 1¼ inch Pipe, each..... | 8.25  |
| “ “ 3, 2¾ x 10 “ “ “ “ “ “ “ “ .....                                      | 8.75  |
| “ “ 4, 3 x 10 “ “ “ “ “ “ “ “ .....                                       | 9.25  |
| “ “ 5, 3¼ x 10 “ “ “ “ “ “ “ “ .....                                      | 9.75  |
| “ “ 6, 3½ x 10 “ “ “ “ “ “ “ “ .....                                      | 10.75 |

This Pump is similar to Fig. 734, except it has a Tight Top instead of an Open Top, preventing anything from being dropped down, but is made with Priming Cup.

ANTI-FREEZING WELL FORCE PUMP.

With Wrought Iron Set Length.

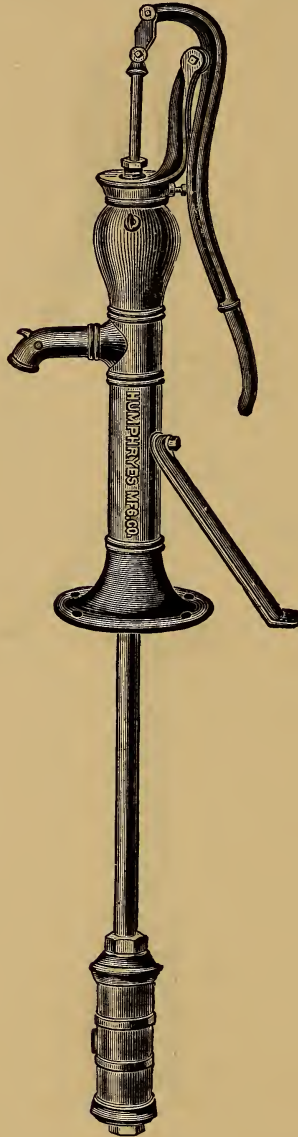


Fig. 736.

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|                                                            |       |
|------------------------------------------------------------|-------|
| Price, 3 x 10 Cylinder, fitted for 1¼ inch Pipe, each..... | 13.50 |
|------------------------------------------------------------|-------|

---

This Force Pump is the most popular style made. It is fitted with Brass Stuffing Nut and Thumb Screw. It is easily worked and used in wells not exceeding thirty feet deep. It is an excellent Pump for Watering Lawns, Washing Windows or for Fire Protection. It is fitted for Hose Connection on Spout. It is fitted complete with Wrought Iron Set Length four feet from base and hole drilled to allow water to run out below the freezing point.

## ANTI-FREEZING FORCE PUMP.

With Wrought Iron Set Length.

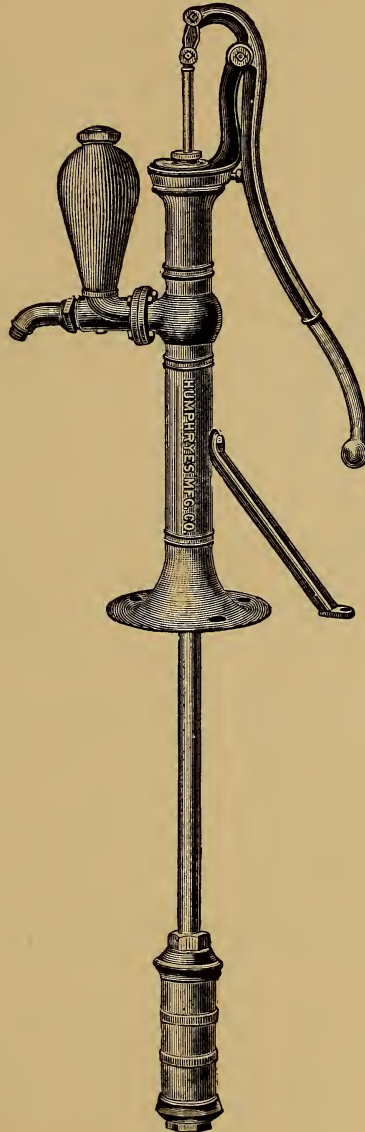


Fig. 737.

---

|                                                     |       |
|-----------------------------------------------------|-------|
| Price, $3\frac{1}{2}$ x 10 inch Cylinder, each..... | 15.00 |
|-----------------------------------------------------|-------|

---

This Pump is one of the best Force Pumps made, and having the Air Chamber on Spout instead of in the Stock, makes a more handsome appearance than Fig. 736, and by many is preferred on this account. It is a very serviceable pump, well made and nicely painted. It is largely used for watering lawns and for fire protection and has had a very large sale.



PUMP STANDARDS.

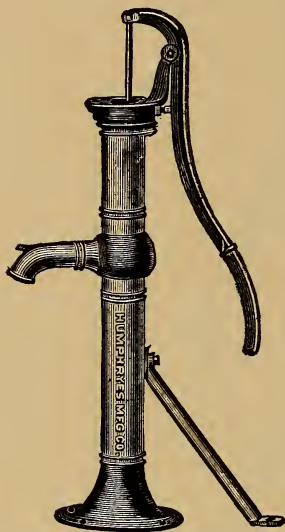


Fig. 738.

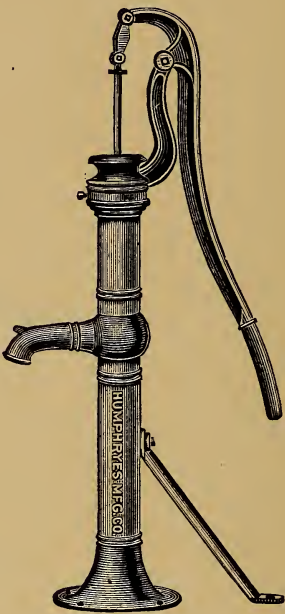


Fig. 739.

This is the same Standard as used on our Set Length Pump, Fig. 734. (See page 260.)

|                             |      |
|-----------------------------|------|
| Price, Fig. 738, No. 3..... | 4.25 |
| Price, Fig. 738, No. 4..... | 4.50 |
| Price, Fig. 738, No. 5..... | 4.75 |
| Price, Fig. 738, No. 6..... | 5.00 |

This is the same Standard as used on our Set Length Pump, Fig. 735. (See page 261.)

|                             |      |
|-----------------------------|------|
| Price, Fig. 739, No. 3..... | 5.00 |
| Price, Fig. 739, No. 4..... | 5.25 |
| Price, Fig. 739, No. 5..... | 5.50 |
| Price, Fig. 739, No. 6..... | 5.75 |

These Standards are generally used in wells over thirty feet deep and where the Cylinder must be placed more than four feet from base of Pump.

For Cylinders suitable for these Standards, see page 275.

FORCE PUMP STANDARDS.

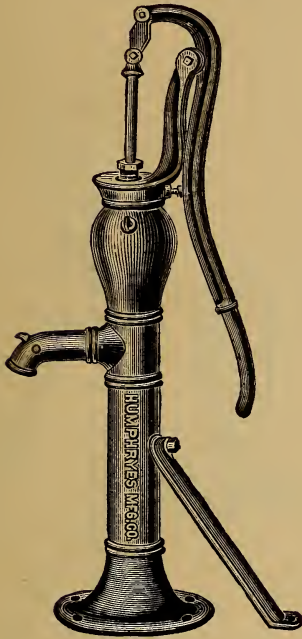


Fig. 740.

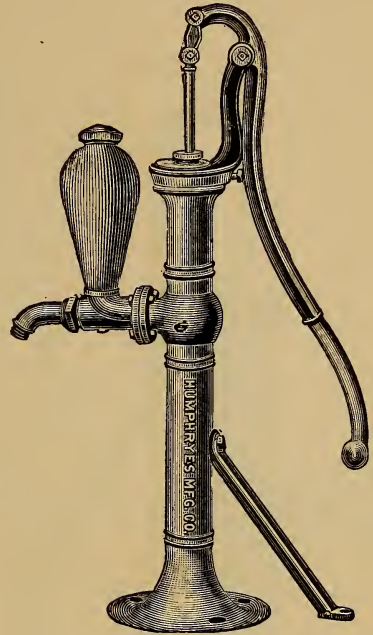


Fig. 741.

---

|                                |       |
|--------------------------------|-------|
| Price, Fig. 740, Standard..... | 11.00 |
|--------------------------------|-------|

---

Fig. 740 is the same Standard as used on our Set Length Force Pump, Fig. 736, Page 262.

---

|                                |       |
|--------------------------------|-------|
| Price, Fig. 741, Standard..... | 11.00 |
|--------------------------------|-------|

---

Fig. 741 is the same Standard as used on our Set Length Force Pump, Fig. 737, Page 263.

These Standards are generally used in wells over thirty feet deep, or where the cylinder must be placed more than four feet from base of Pump.

For Cylinders suitable for these Standards, (see page 275.)

DEEP WELL PUMP STANDARDS.

Extra Heavy, with Revolving Fulcrum.

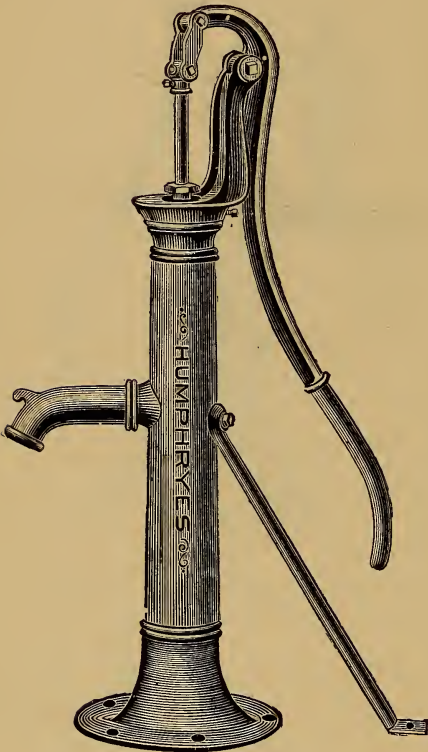


Fig. 742.



Fig. 743.

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|                                |       |
|--------------------------------|-------|
| Price, Fig. 742, Standard..... | 13.00 |
|--------------------------------|-------|

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|                                |       |
|--------------------------------|-------|
| Price, Fig. 743, Standard..... | 16.00 |
|--------------------------------|-------|

---

For Cylinders suitable for these Standards, see page 275.

These Standards are made extra heavy and are thoroughly well made in every particular and are intended for use in very deep wells or for public use in towns and villages.



**ANTI-FREEZING WIND-MILL PUMP.**

With Wrought Iron Set Length.

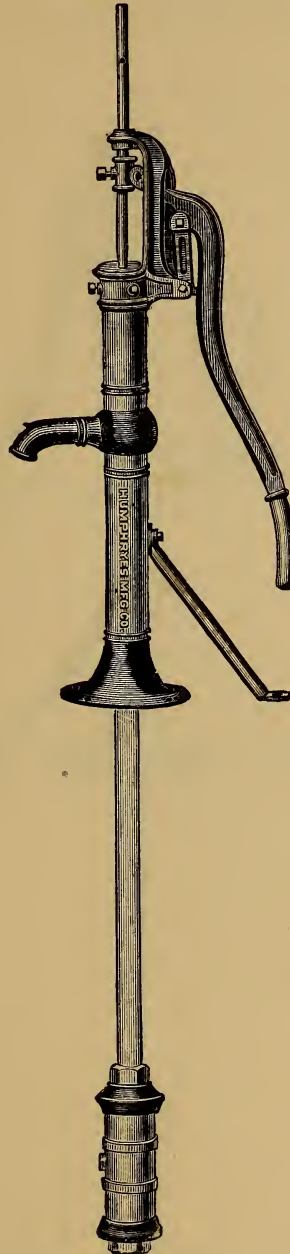


Fig. 744.

|                                                      |      |                                                      |       |
|------------------------------------------------------|------|------------------------------------------------------|-------|
| Price, No. 3, $2\frac{3}{4}$ x 10 inch Cylinder..... | 9.25 | Price, No. 5, $3\frac{1}{4}$ x 10 inch Cylinder..... | 10.25 |
| " " 4, 3 x 10 " " .....                              | 9.75 | " " 6, $3\frac{1}{2}$ x 10 " " .....                 | 11.00 |

This style Pump is being used more extensively every year, both for Wind-mill use and as a Hand Pump. When fitted with the wind-mill head the Pump works much more easily, the rod moves in a perfectly vertical line, and there is not nearly as much wear on the leathers. It is used in wells not exceeding thirty feet. All of our Wind-mill Pumps are fitted with our Patent Round Wind-mill Rod, and acknowledged by all who have used them to be the best made.

ANTI-FREEZING WIND-MILL FORCE PUMP.

With Wrought Iron Set Length.

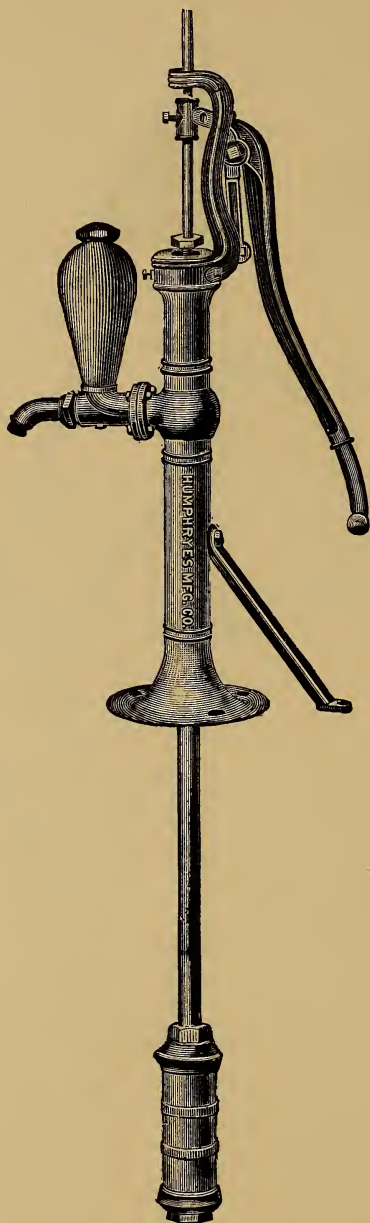


Fig. 745.

---

|                                         |       |
|-----------------------------------------|-------|
| Price, 3½ x 10 inch Cylinder, each..... | 17.00 |
|-----------------------------------------|-------|

---

This cut represents the same Pump as is illustrated under Fig. 737 (see page 263), but with the addition of a Wind-Mill Head, making it work much more easily and with less wear on the working parts.

## ANTI-FREEZING WIND-MILL FORCE PUMP.

With Wrought Iron Set Length.

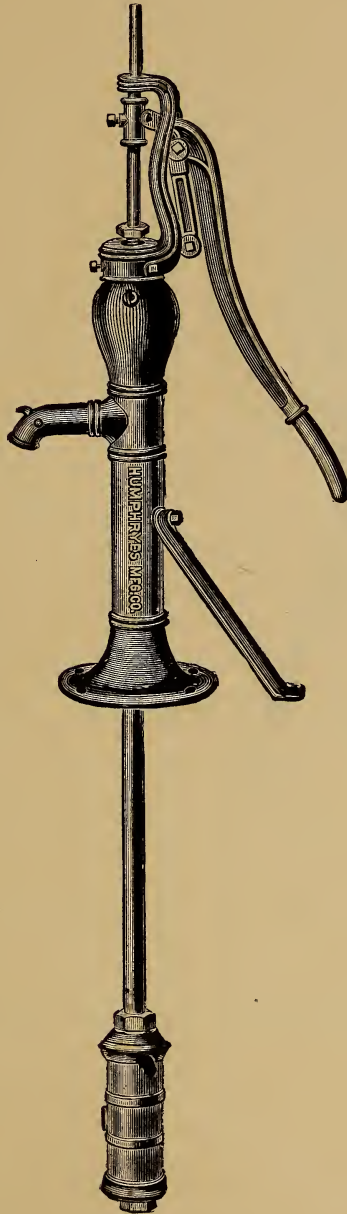


Fig. 746.

---

|                                       |       |
|---------------------------------------|-------|
| Price, Fig. 746, 3 x 10 Cylinder..... | 14.00 |
|---------------------------------------|-------|

---

This represents the same Pump as is illustrated under Fig. 736 (see page 262), with the addition of a Wind-Mill Head, making it work much more easily and with less wear on the working parts. It is also fitted with back outlet opposite the spout so it can be used to pump water into tank by closing spout.



PATENT WIND-MILL  
STANDARD.

With Brackets.

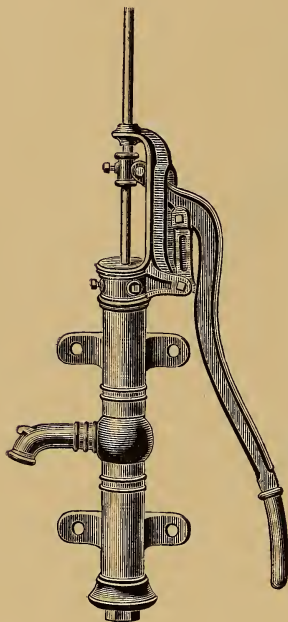


Fig. 747.

PATENT WIND-MILL  
STANDARD.

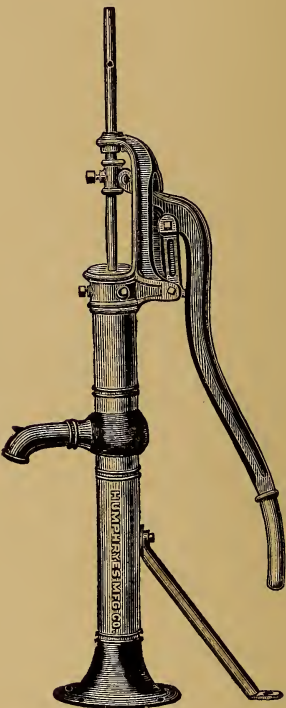


Fig. 748.

|                                                                               |   |   |    |   |   |    |   |    |   |       |
|-------------------------------------------------------------------------------|---|---|----|---|---|----|---|----|---|-------|
| Price, Fig. 747, Standard.....                                                |   |   |    |   |   |    |   |    |   | 5.50  |
| Price, Fig. 748, No. 3, Standard, fitted for 1¼ inch Pipe, 6 inch Stroke..... |   |   |    |   |   |    |   |    |   | 7.00  |
| "                                                                             | " | " | 4, | " | " | 1¼ | " | 6  | " | 8.00  |
| "                                                                             | " | " | 5, | " | " | 1¼ | " | 6  | " | 9.00  |
| "                                                                             | " | " | 6, | " | " | 1¼ | " | 6  | " | 9.50  |
| "                                                                             | " | " | 6, | " | " | 2  | " | 10 | " | 11.00 |

For Cylinders suitable for these Standards, see page 275.

All of our Wind-mill Pumps and Standards are fitted with Round Rods. Acknowledged by all who have used them as the best Pump made, being much more easy to work and with less wear than with the old style flat rod.

## PATENT WIND-MILL FORCE PUMP STANDARDS.

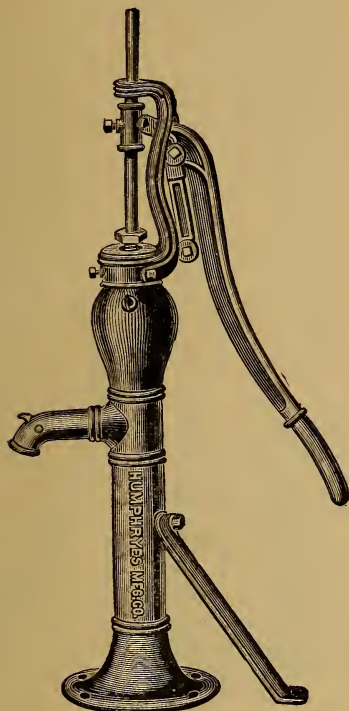


Fig. 749.

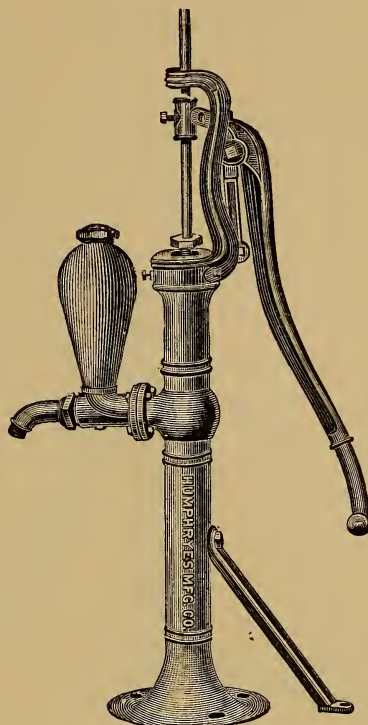


Fig. 750.

Fig. 749 represents the same Standard as is illustrated under Fig. 746, (see page 269), without the set length.

|                                                                           |       |
|---------------------------------------------------------------------------|-------|
| Price, Fig. 749, Standard, 1 $\frac{1}{4}$ inch Pipe, 6 inch Stroke ..... | 12.00 |
| " " " 2 " " 10 " " .....                                                  | 13.50 |
| " " " with Cock.....                                                      | 13.50 |

Fig. 750 represents the same Standard as is illustrated under Fig. 745, (see page 268), but without the set length.

|                                                          |       |
|----------------------------------------------------------|-------|
| Price, Fig. 750, Standard, complete, 6 inch Stroke ..... | 13.00 |
| " " " " 10 " " .....                                     | 14.50 |

For Cylinders suitable for this Standard, (see page 275).

No Pumps ever designed have had the sale that these two Standards have, especially Fig. 749, (known in our Pump Catalogue as Fig. 425). They are both thoroughly well made, nicely painted, and are suitable both for shallow and deep wells. Fig. 749 is used largely in wells 200 feet deep.

Patent Wind-Mill Pump Standard,

Patent Wind-Mill Force Pump Standard,

EXTRA HEAVY.

EXTRA HEAVY.

For Deep Wells.

For Deep Wells.

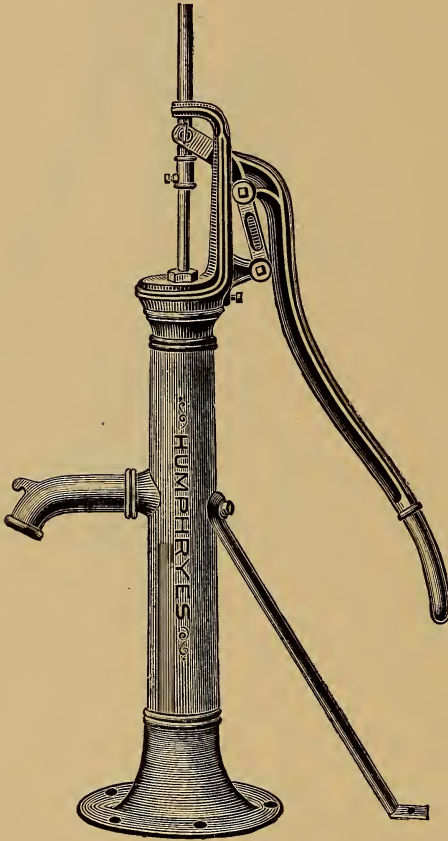


Fig. 751.



Fig. 752.

---

|                                      |       |
|--------------------------------------|-------|
| Price, Fig. 751, Standard, each..... | 15.00 |
| Price, Fig. 752, Standard, each..... | 17.00 |

---

These Standards are the same as shown on page 266, Figs. 742 and 743, with the addition of a Wind-Mill Head, making them work more easily and with less wear to the working parts.

For Cylinders suitable for these Standards see page 275.

PATENT ANTI-FREEZING WIND-MILL FORCE PUMP STANDARD.

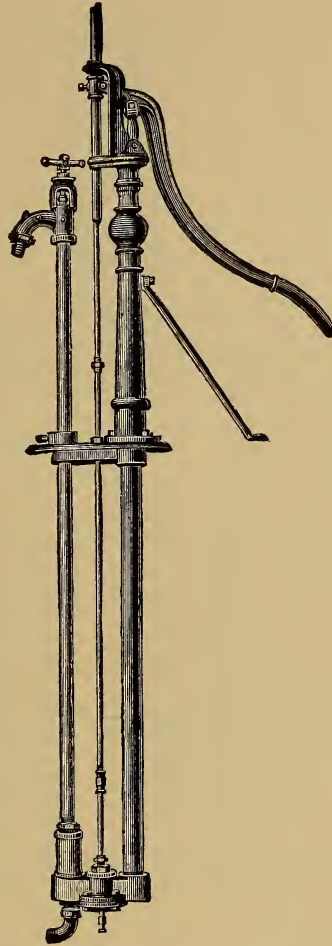


Fig. 753.

No. 1.

|                                                                                                                       |    |   |                |   |   |   |   |   |   |             |
|-----------------------------------------------------------------------------------------------------------------------|----|---|----------------|---|---|---|---|---|---|-------------|
| Price, 6 inch Stroke, $1\frac{1}{4}$ inch Pipe, Air Chamber, and tapped for $1\frac{1}{4}$ inch Pipe Connections..... |    |   |                |   |   |   |   |   |   | 16.00       |
| "                                                                                                                     | 10 | " | $1\frac{1}{4}$ | " | " | " | " | 2 | " | ..... 17.50 |

No. 2.

|                                                                                                          |    |   |   |   |   |   |   |   |   |             |
|----------------------------------------------------------------------------------------------------------|----|---|---|---|---|---|---|---|---|-------------|
| Price, 6 inch Stroke, 2 inch Pipe, Air Chamber, and tapped for $1\frac{1}{4}$ inch Pipe Connections..... |    |   |   |   |   |   |   |   |   | 18.00       |
| "                                                                                                        | 10 | " | 2 | " | " | " | " | 2 | " | ..... 19.50 |

This Standard or Three-Way Pump has given excellent satisfaction. We recommend the No. 2 Pump, 2 x 10, for tubular wells. The valve in this Pump is very simple, but strong and durable. For Cylinders suitable for this Standard, see page 275.



SELF-PRIMING CYLINDERS FOR DEEP WELL AND WIND-MILL  
FORCE PUMPS.

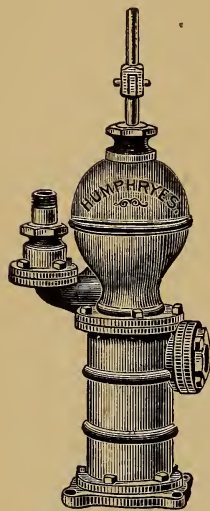


Fig. 754.

Forked Rod.



Fig. 755.

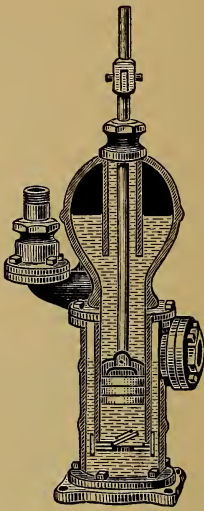


Fig. 756.

The above cuts illustrate our Self-Priming Cylinders for Deep Well and Wind-Mill Force Pumps.

SIZES, CAPACITY AND PRICES.

|                 |                                                    |       |
|-----------------|----------------------------------------------------|-------|
| Price, No. 1, 2 | inch Bore, for 1¼ inch Suction and Discharge each. | 24.00 |
| “ “ 2, 2¼       | “ “ 1¼ “ “ “ “                                     | 24.50 |
| “ “ 3, 2½       | “ “ 1½ “ “ “ “                                     | 25.00 |
| “ “ 4, 3        | “ “ 1½ “ “ “ “                                     | 25.25 |
| “ “ 5, 3½       | “ “ 2 “ “ “ “                                      | 27.25 |
| “ “ 6, 4        | “ “ 2 “ “ “ “                                      | 30.50 |
| “ “ 7, 4½       | “ “ 2½ “ “ “ “                                     | 45.00 |
| “ “ 8, 5        | “ “ 2½ “ “ “ “                                     | 50.00 |
| “ “ 9, 5½       | “ “ 3 “ “ “ “                                      | 56.00 |
| “ “ 10, 6       | “ “ 3 “ “ “ “                                      | 64.00 |

Forked Rod, to attach Wind-Mill, \$1.50 extra list.

All parts of these Pumps are made so that they will interchange.

CYLINDERS.



Fig. 757.

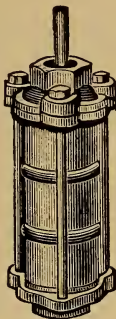


Fig. 758.



Fig. 759.

SIZES AND PRICES OF FIGURES 757, 758 AND 759.

| Size. |           |       |             |                           | Size.      |       |           |       |             |
|-------|-----------|-------|-------------|---------------------------|------------|-------|-----------|-------|-------------|
|       |           | Iron. | Brass Body. | Iron Body<br>Brass Lined. | All Brass. |       |           | Iron. | Brass Body. |
| 2     | x 10..... | 3.75  | 7.50        | 6.75                      | 8.75       | 2 3/4 | x 14..... | 7.00  | 9.75        |
| 2 1/4 | x 10..... | 4.00  | 7.75        | 7.25                      | 9.00       | 3     | x 14..... | 7.50  | 10.25       |
| 2 1/2 | x 10..... | 4.35  | 8.00        | 7.75                      | 9.50       | 3 1/4 | x 14..... | 8.00  | 11.00       |
| 2 3/4 | x 10..... | 4.70  | 8.50        | 8.25                      | 10.50      | 3 1/2 | x 14..... | 8.50  | 12.25       |
| 3     | x 10..... | 5.00  | 9.00        | 8.75                      | 11.50      | 4     | x 14..... | 10.00 | 15.75       |
| 3 1/4 | x 10..... | 5.30  | 9.75        | 9.25                      | 12.50      | 4 1/2 | x 14..... | 12.50 | 18.00       |
| 3 1/2 | x 10..... | 5.60  | 10.50       | 9.75                      | 14.50      | 5     | x 14..... | 14.25 | 20.50       |
| 4     | x 10..... | 6.50  | 14.00       | 10.50                     | 17.00      | 2     | x 16..... | 6.00  | 9.00        |
| 2     | x 12..... | 5.50  | 8.00        | 7.50                      | 12.50      | 2 1/4 | x 16..... | 6.50  | 9.75        |
| 2 1/4 | x 12..... | 5.75  | 8.25        | 8.00                      | 13.00      | 2 1/2 | x 16..... | 7.00  | 10.25       |
| 2 1/2 | x 12..... | 6.00  | 8.50        | 8.50                      | 14.00      | 2 3/4 | x 16..... | 7.50  | 10.75       |
| 2 3/4 | x 12..... | 6.50  | 9.00        | 9.00                      | 15.00      | 3     | x 16..... | 8.00  | 11.25       |
| 3     | x 12..... | 7.00  | 9.50        | 9.50                      | 16.25      | 3 1/4 | x 16..... | 8.50  | 12.00       |
| 3 1/4 | x 12..... | 7.50  | 10.25       | 10.00                     | 17.50      | 3 1/2 | x 16..... | 9.00  | 13.50       |
| 3 1/2 | x 12..... | 8.00  | 11.25       | 10.50                     | 20.00      | 4     | x 16..... | 10.50 | 17.50       |
| 4     | x 12..... | 9.25  | 15.00       | 12.50                     | 27.00      | 4 1/2 | x 16..... | 13.00 | 21.00       |
| 2     | x 14..... | 6.00  | 8.50        | 8.25                      | 13.00      | 5     | x 16..... | 15.50 | 24.00       |
| 2 1/4 | x 14..... | 6.25  | 9.00        | 8.75                      | 14.00      | 6     | x 16..... | 22.00 | 30.00       |
| 2 1/2 | x 14..... | 6.50  | 9.25        | 9.25                      | 14.50      |       |           |       |             |

WOOD PUMP CYLINDER.

|                                              |      |
|----------------------------------------------|------|
| Price, Fig. 760, 3 x 12 inch, each.....      | 3.00 |
| Price, Fig. 760, 3 1/4 x 12 inch, each ..... | 3.25 |
| Price, Fig. 760, 3 1/2 x 12 inch, each.....  | 4.00 |

DOUBLE ACTING CYLINDER.

|                                        |       |
|----------------------------------------|-------|
| Price, Fig. 761, 2 1/2 inch, each..... | 10.00 |
| Price, Fig. 761, 3 inch, each....      | 12.00 |
| Price, Fig. 761, 4 inch, each.....     | 14.00 |



Fig. 760.

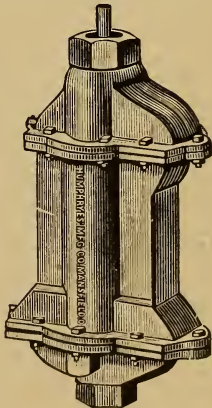


Fig. 761.

FORCE PUMP ON BASE.

FORCE PUMP WITH BRACKETS.

With Revolving Fulcrum and Brass Piston Rod.

With Revolving Lever and Brass Piston Rod.

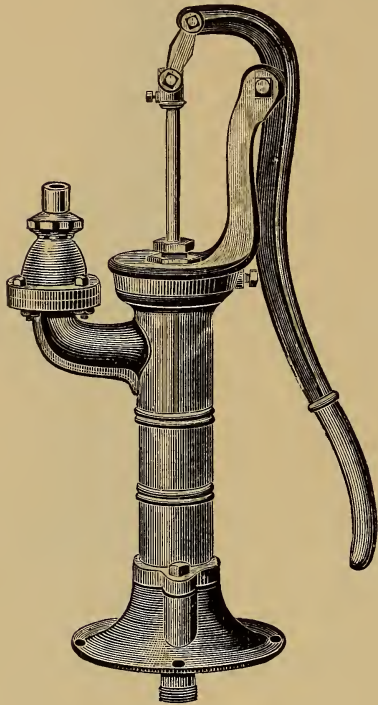


Fig. 762.

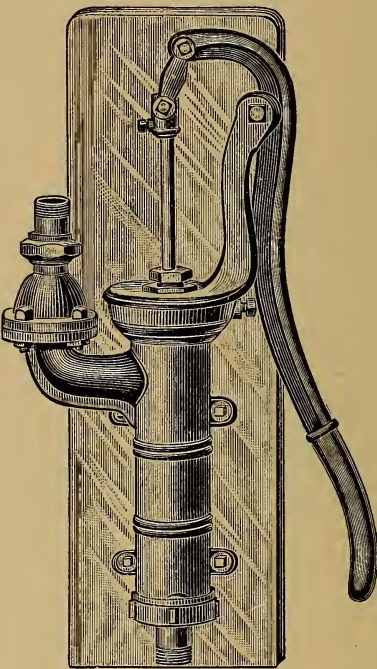


Fig. 763.

Sizes and Prices.

| Size.                                                                       |   |   |       |   |   |   |    |   |   | Iron<br>Cylinder. | Brass<br>Cylinder. |
|-----------------------------------------------------------------------------|---|---|-------|---|---|---|----|---|---|-------------------|--------------------|
| Price, Fig. 762, No. 1, 2 inch diameter, fitted for 1¼ inch Pipe, each..... |   |   |       |   |   |   |    |   |   | 8.00              | 13.50              |
| "                                                                           | " | " | 2, 2½ | " | " | " | 1¼ | " | " | 9.50              | 14.00              |
| "                                                                           | " | " | 3, 3  | " | " | " | 1¼ | " | " | 11.00             | 15.00              |
| "                                                                           | " | " | 4, 3½ | " | " | " | 1½ | " | " | 17.00             | 24.00              |
| "                                                                           | " | " | 5, 4  | " | " | " | 2  | " | " | 18.00             | 30.00              |

|                                                                             |   |   |       |   |   |   |    |   |   |       |       |
|-----------------------------------------------------------------------------|---|---|-------|---|---|---|----|---|---|-------|-------|
| Price, Fig. 763, No. 1, 2 inch diameter, fitted for 1¼ inch Pipe, each..... |   |   |       |   |   |   |    |   |   | 8.00  | 13.50 |
| "                                                                           | " | " | 2, 2½ | " | " | " | 1¼ | " | " | 9.50  | 14.00 |
| "                                                                           | " | " | 3, 3  | " | " | " | 1¼ | " | " | 11.00 | 15.00 |
| "                                                                           | " | " | 4, 3½ | " | " | " | 1½ | " | " | 17.00 | 24.00 |
| "                                                                           | " | " | 5, 4  | " | " | " | 2  | " | " | 18.00 | 30.00 |



FORCE PUMP ON BASE.

FORCE PUMP WITH BRACKETS.

UPPER DISCHARGE.

UPPER DISCHARGE.

With Revolving Fulcrum, Air Chamber and Brass Piston Rod.

With Revolving Fulcrum, Air Chamber and Brass Piston Rod.

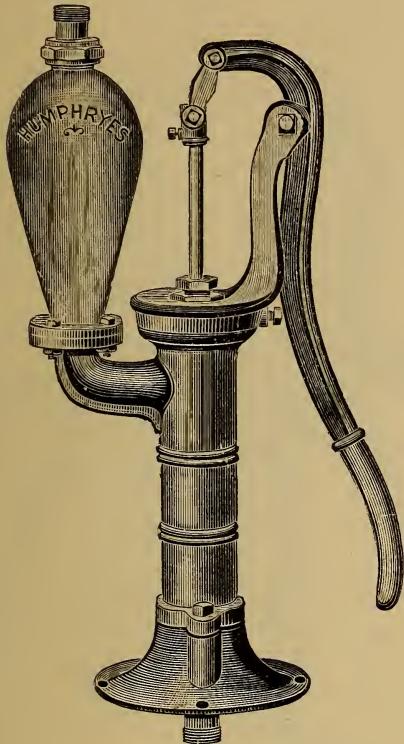


Fig. 764.

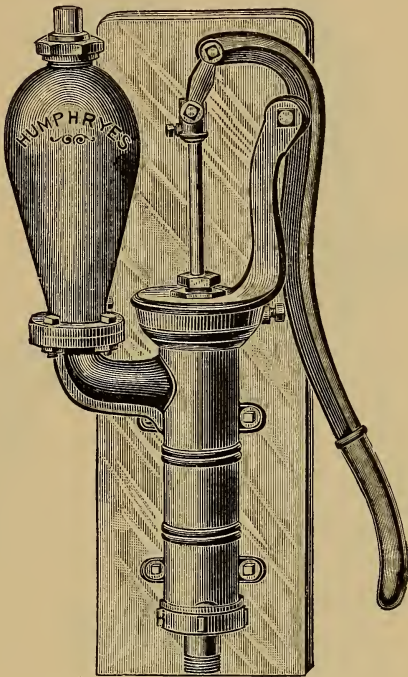


Fig. 765.

Sizes and Prices.

| Size.                   |    |                |            |    |            |       |       |  |  | Iron<br>Cylinder. | Brass<br>Cylinder. |
|-------------------------|----|----------------|------------|----|------------|-------|-------|--|--|-------------------|--------------------|
| Price, Fig. 764, No. 1, | 2  | inch diameter, | fitted for | 1¼ | inch Pipe, | each  | ..... |  |  | 8.50              | 14.00              |
| “ “ “ 2,                | 2½ | “ “ “          | “ “ “      | 1¼ | “ “ “      | ..... |       |  |  | 10.00             | 15.00              |
| “ “ “ 3,                | 3  | “ “ “          | “ “ “      | 1¼ | “ “ “      | ..... |       |  |  | 12.00             | 16.00              |
| “ “ “ 4,                | 3½ | “ “ “          | “ “ “      | 1½ | “ “ “      | ..... |       |  |  | 18.00             | 26.00              |
| “ “ “ 5,                | 4  | “ “ “          | “ “ “      | 2  | “ “ “      | ..... |       |  |  | 21.00             | 32.00              |

|                         |    |                |            |    |            |       |       |  |  |       |       |
|-------------------------|----|----------------|------------|----|------------|-------|-------|--|--|-------|-------|
| Price, Fig. 765, No. 1, | 2  | inch diameter, | fitted for | 1¼ | inch Pipe, | each  | ..... |  |  | 8.50  | 14.00 |
| “ “ “ 2,                | 2½ | “ “ “          | “ “ “      | 1¼ | “ “ “      | ..... |       |  |  | 10.00 | 15.00 |
| “ “ “ 3,                | 3  | “ “ “          | “ “ “      | 1¼ | “ “ “      | ..... |       |  |  | 12.00 | 16.00 |
| “ “ “ 4,                | 3½ | “ “ “          | “ “ “      | 1½ | “ “ “      | ..... |       |  |  | 18.00 | 26.00 |
| “ “ “ 5,                | 4  | “ “ “          | “ “ “      | 2  | “ “ “      | ..... |       |  |  | 21.00 | 32.00 |



FORCE PUMP ON BASE.

DOUBLE DISCHARGE.

With Revolving Fulcrum, Air Chamber and Brass  
Piston Rod.

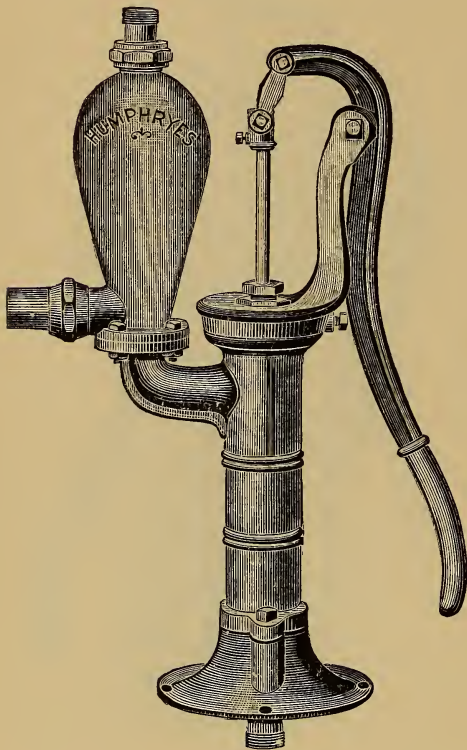


Fig. 766.

FORCE PUMP WITH BRACKETS.

DOUBLE DISCHARGE.

With Revolving Fulcrum, Air Chamber and Brass  
Piston Rod.

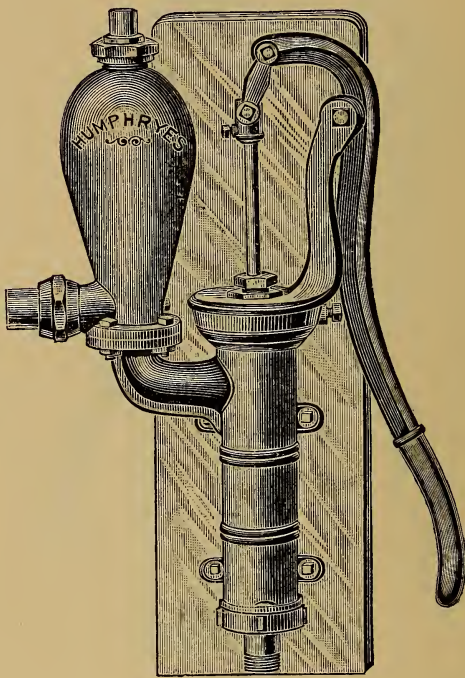


Fig. 767.

Sizes and Prices.

| Size.                                                                 | Iron<br>Cylinder. | Brass<br>Cylinder. |
|-----------------------------------------------------------------------|-------------------|--------------------|
| Price, Fig. 766, No. 1, 2 inch diameter, fitted for 1¼ inch pipe..... | 10.00             | 15.00              |
| “ “ “ 2, 2½ “ “ “ 1¼ “ “ .....                                        | 11.00             | 16.00              |
| “ “ “ 3, 3 “ “ “ 1¼ “ “ .....                                         | 13.00             | 18.00              |
| “ “ “ 4, 3½ “ “ “ 1½ “ “ .....                                        | 19.00             | 27.00              |
| “ “ “ 5, 4 “ “ “ 2 “ “ .....                                          | 21.00             | 33.00              |

|                                                                       |       |       |
|-----------------------------------------------------------------------|-------|-------|
| Price, Fig. 767, No. 1, 2 inch diameter, fitted for 1¼ inch pipe..... | 10.00 | 15.00 |
| “ “ “ 2, 2½ “ “ “ 1¼ “ “ .....                                        | 11.00 | 16.00 |
| “ “ “ 3, 3 “ “ “ 1¼ “ “ .....                                         | 13.00 | 18.00 |
| “ “ “ 4, 3½ “ “ “ 1½ “ “ .....                                        | 19.00 | 27.00 |
| “ “ “ 5, 4 “ “ “ 2 “ “ .....                                          | 21.00 | 33.00 |

## FORCE PUMP ON BASE.

## FORCE PUMP WITH BRACKETS.

## HORIZONTAL DISCHARGE.

## HORIZONTAL DISCHARGE.

With Revolving Fulcrum, Air Chamber and  
Brass Piston Rod.

With Revolving Fulcrum, Air Chamber and  
Brass Piston Rod.

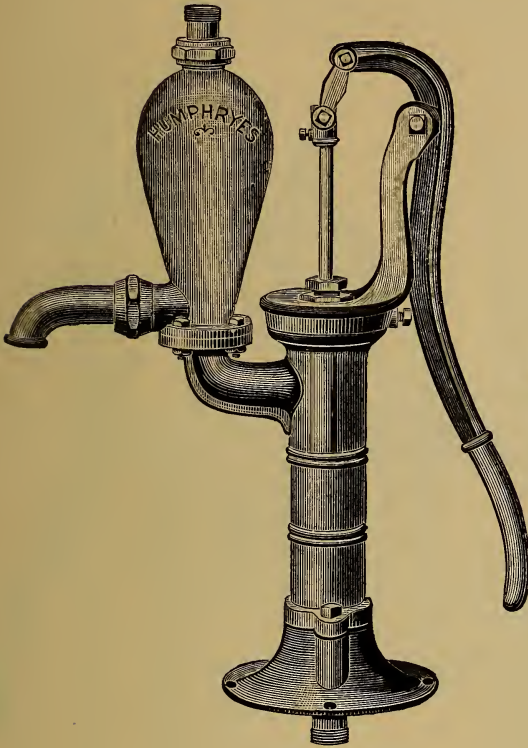


Fig. 768.

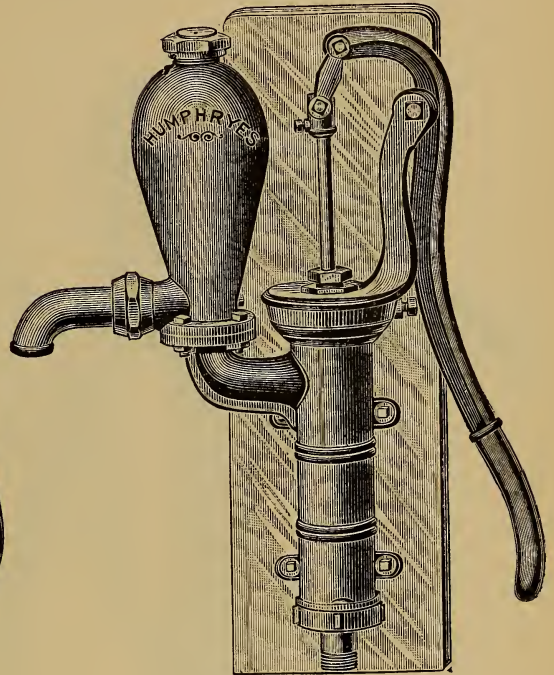


Fig. 769.

## Sizes and Prices.

| Size.                     |                                                     |  |  |  |  |  | Iron. | Brass<br>Cylinder. |
|---------------------------|-----------------------------------------------------|--|--|--|--|--|-------|--------------------|
| Price, Fig. 768, No. 1, 2 | inch diameter, fitted for $1\frac{1}{4}$ inch pipe. |  |  |  |  |  | 9.50  | 14.00              |
| " " " 2, $2\frac{1}{2}$   | " " " $1\frac{1}{4}$                                |  |  |  |  |  | 10.00 | 15.00              |
| " " " 3, 3                | " " " $1\frac{1}{4}$                                |  |  |  |  |  | 12.00 | 16.00              |
| " " " 4, $3\frac{1}{2}$   | " " " $1\frac{1}{2}$                                |  |  |  |  |  | 18.00 | 25.00              |
| " " " 5, 4                | " " " 2                                             |  |  |  |  |  | 20.50 | 32.00              |
| Price, Fig. 769, No. 1, 2 | inch diameter, fitted for $1\frac{1}{4}$ inch pipe. |  |  |  |  |  | 9.50  | 14.00              |
| " " " 2, $2\frac{1}{2}$   | " " " $1\frac{1}{4}$                                |  |  |  |  |  | 10.00 | 15.00              |
| " " " 3, 3                | " " " $1\frac{1}{4}$                                |  |  |  |  |  | 12.00 | 16.00              |
| " " " 4, $3\frac{1}{2}$   | " " " $1\frac{1}{2}$                                |  |  |  |  |  | 18.00 | 25.00              |
| " " " 5, 4                | " " " 2                                             |  |  |  |  |  | 20.50 | 32.00              |

FORCE PUMP ON BASE.

FORCE PUMP WITH BRACKETS.

WITH COCK.

WITH COCK.

With Revolving Fulcrum, Air Chamber and Brass Piston Rod.

With Revolving Fulcrum, Air Chamber and Brass Piston Rod.

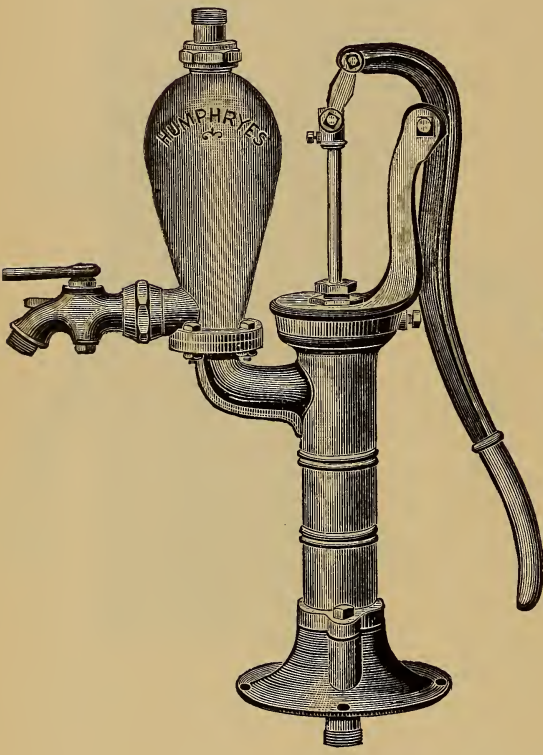


Fig. 770.

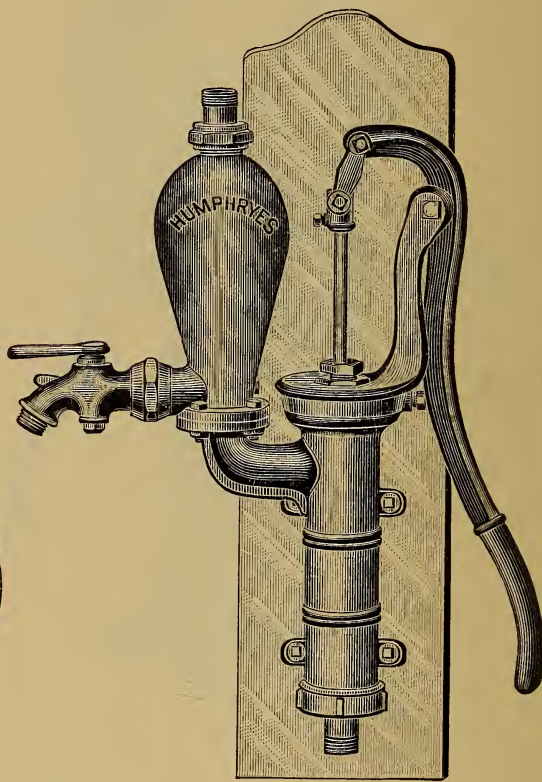


Fig. 771.

SIZES AND PRICES.

| Size.                   |                                                  | Iron. | Brass<br>Cylinder. |
|-------------------------|--------------------------------------------------|-------|--------------------|
| Price, Fig. 770, No. 1, | 2 inch diameter, fitted for 1 1/4 inch pipe..... | 11.00 | 16.50              |
| " " " 2,                | 2 1/2 " " " 1 1/4 " .....                        | 12.50 | 18.00              |
| " " " 3,                | 3 " " " 1 1/4 " .....                            | 14.50 | 19.50              |
| " " " 4,                | 3 1/2 " " " 1 1/2 " .....                        | 21.50 | 29.50              |
| " " " 5,                | 4 " " " 2 " .....                                | 22.50 | 35.50              |
| Price, Fig. 771, No. 1, | 2 inch diameter, fitted for 1 1/4 inch pipe..... | 11.00 | 16.50              |
| " " " 2,                | 2 1/2 " " " 1 1/4 " .....                        | 12.50 | 18.00              |
| " " " 3,                | 3 " " " 1 1/4 " .....                            | 14.50 | 19.50              |
| " " " 4,                | 3 1/2 " " " 1 1/2 " .....                        | 21.50 | 29.50              |
| " " " 5,                | 4 " " " 2 " .....                                | 22.50 | 35.50              |



WIND-MILL FORCE PUMP ON BASE.

WITH COCK.

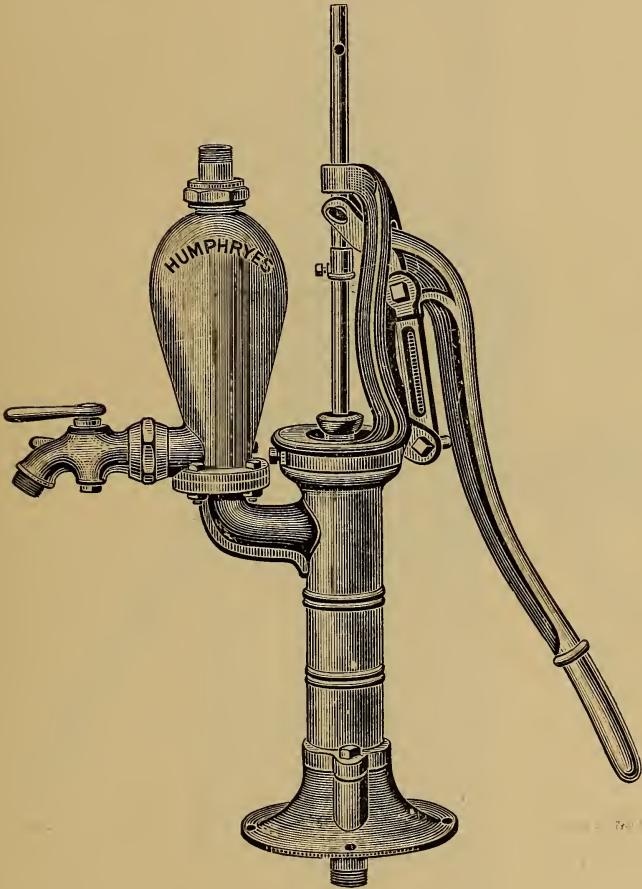


Fig. 772.

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|                                               |       |
|-----------------------------------------------|-------|
| Price, complete, No. 2, 2½ inch Cylinder..... | 13.50 |
| “ “ “ 3, 3 “ “ .....                          | 15.00 |

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## WIND-MILL FORCE PUMP WITH BRACKETS.

WITH COCK.

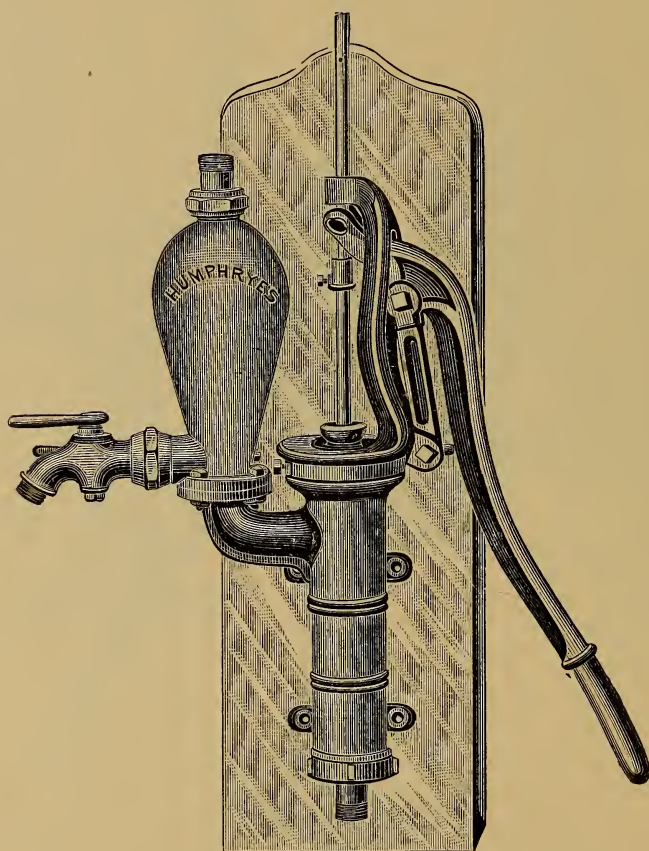


Fig. 773.

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|                                               |       |
|-----------------------------------------------|-------|
| Price, complete, No. 2, 2½ inch Cylinder..... | 13.50 |
| “ “ “ 3, 3 “ “ .....                          | 15.00 |

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HOUSE FORCE PUMP.

Mounted on Plank, with Connecting Rod and Guide.

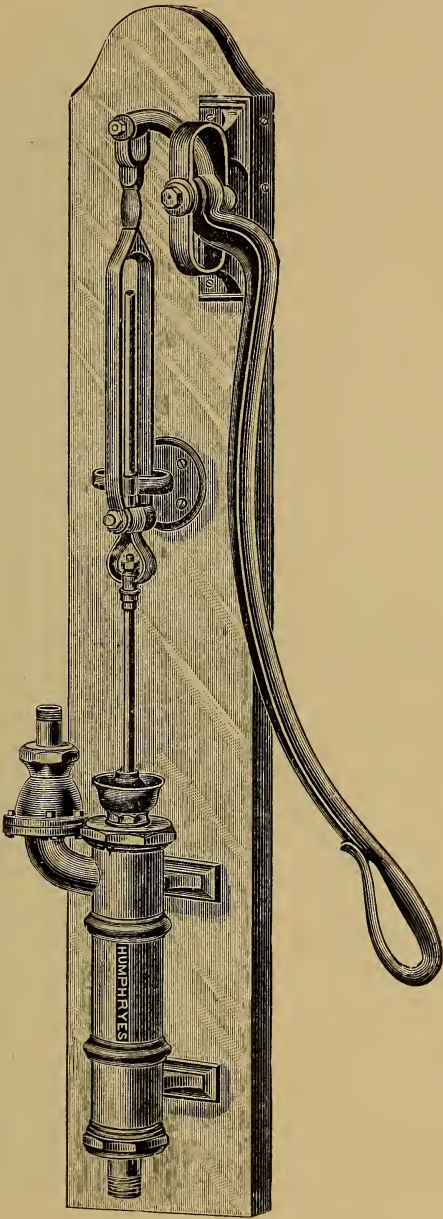


Fig. 774.

| Size.           |      |           |            |    |      |                 | Iron<br>Cylinder. | Brass<br>Cylinder. |
|-----------------|------|-----------|------------|----|------|-----------------|-------------------|--------------------|
| Price, No. 1, 2 | inch | Cylinder, | fitted for | 1¼ | inch | pipe, each..... | 14.00             | 18.00              |
| “ “ 2, 2½       | “    | “         | “          | 1¼ | “    | “ .....         | 15.00             | 20.00              |
| “ “ 3, 3        | “    | “         | “          | 1¼ | “    | “ .....         | 16.50             | 22.00              |
| “ “ 4, 3½       | “    | “         | “          | 1½ | “    | “ .....         | 22.00             | 32.00              |



## HOUSE FORCE PUMP.

Mounted on Plank, With Connecting Rod, Guide and Air-Chamber.

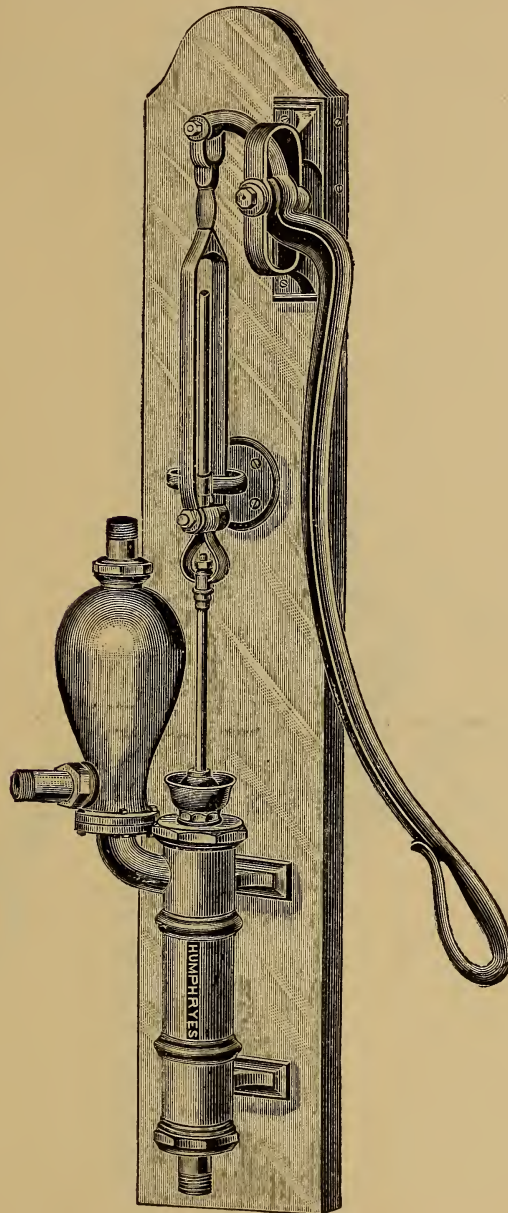


Fig. 776.

| Size.         |   |                                |    |      |                    |   |   |    |   | Iron<br>Cylinder. | Brass<br>Cylinder. |
|---------------|---|--------------------------------|----|------|--------------------|---|---|----|---|-------------------|--------------------|
| Price, No. 1, | 2 | inch Cylinder, fitted for pipe | 1¼ | inch | Calibre, each..... |   |   |    |   | 17.00             | 23.00              |
| "             | " | 2, 2½                          | "  | "    | "                  | " | " | 1¼ | " | 18.00             | 25.00              |
| "             | " | 3, 3                           | "  | "    | "                  | " | " | 1¼ | " | 20.00             | 27.00              |
| "             | " | 4, 3½                          | "  | "    | "                  | " | " | 1½ | " | 27.00             | 37.00              |



HOUSE FORCE PUMP.

For House Use, With Cock on Lower Discharge.

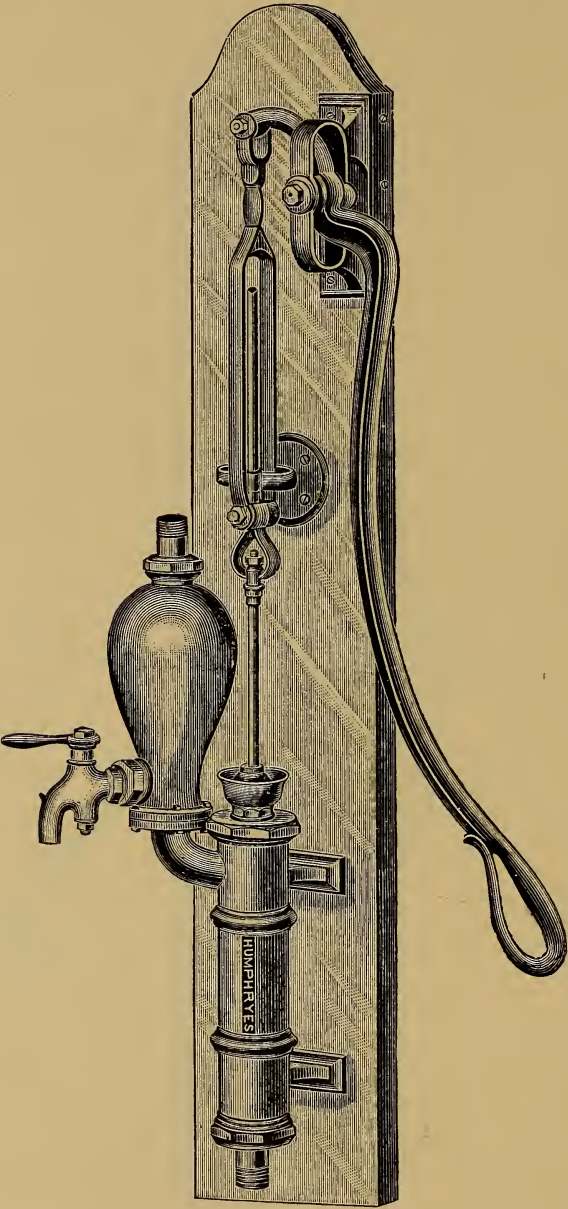


Fig. 777.

| Size.           |                                                           |   |   |   |   |   |   |   |   | Iron<br>Cylinder. | Brass<br>Cylinder. |
|-----------------|-----------------------------------------------------------|---|---|---|---|---|---|---|---|-------------------|--------------------|
| Price, No. 1, 2 | inch Cylinder, fitted for pipe 1¼ inch Calibre, each..... |   |   |   |   |   |   |   |   | 18.00             | 27.00              |
| “ “ 2, 2½       | “                                                         | “ | “ | “ | “ | “ | “ | “ | “ | 19.00             | 28.00              |
| “ “ 3, 3        | “                                                         | “ | “ | “ | “ | “ | “ | “ | “ | 22.00             | 30.00              |
| “ “ 4, 3½       | “                                                         | “ | “ | “ | “ | “ | “ | “ | “ | 28.50             | 40.00              |

## BRASS HOUSE FORCE PUMP.

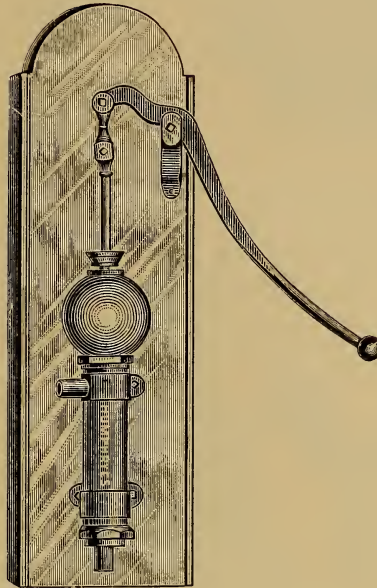


Fig. 778.

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|                             |       |
|-----------------------------|-------|
| Price, 2 inch Cylinder..... | 20.00 |
|-----------------------------|-------|

---

This Pump is used largely to raise water to upper floors of buildings when the water pressure is not heavy enough to force it up. It is all brass and well made.

SHIP BILGE PUMP.

With Copper Lined Cylinder and Reversible Lever.

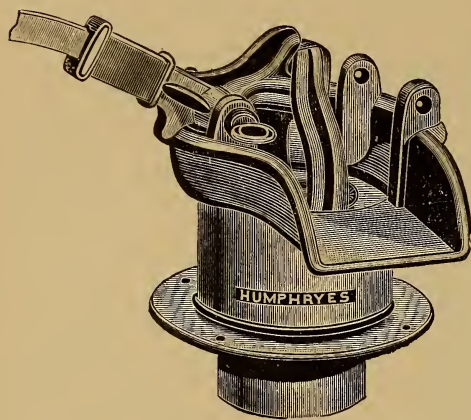


Fig. 779.

This Pump is designed for use on small vessels or for pumping out wheel pits, wells, docks, etc.

It is a very superior Pump, the valves are large, and capable of being withdrawn with ease. The openings or waterways are so large and free, that any substance that will pass the suction orifice, will easily pass through the valves.

|                                                                                                      |       |
|------------------------------------------------------------------------------------------------------|-------|
| Price, No. 1, Cylinder, 6½ inch. diameter, capacity of stroke, 70 gallons, fitted for 2 inch suction |       |
| Pipe, each.....                                                                                      | 16.00 |
| Price, No. 2, Cylinder, 10 inch diameter, capacity of stroke, 7 gallon, fitted for 3 inch suction    |       |
| Pipe, each.....                                                                                      | 28.00 |

DOUBLE ACTING FORCE PUMP.

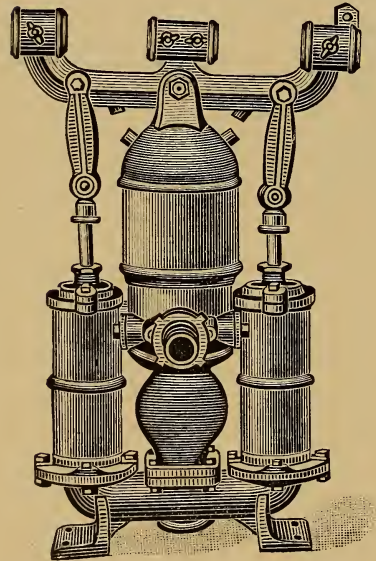


Fig. 780.

This Pump is Compact, light and strong; it is made with either leather or metallic valves. It has, because of its many unique points, been pronounced by all ship masters and naval experts, the perfection of Force Pumps for fire and other purposes on board of ships. As the cut shows it is supplied with Vacuum Chambers, Trip Valves, Brass Piston Rods, Let-Off Cocks to avoid injury by frost, enlarged Water Ways, Rubber Bumpers to relieve the shock on Air-Chamber. It will lift water 30 feet. It will throw a 58 inch stream 100 feet horizontally. When supplied with folding breaks, it is one of the best stationary fire engines made.

All parts are made interchangeable. We make 4 sizes as follows:

| Size.                                                                     | Iron. | Brass Lined. | Brass. |
|---------------------------------------------------------------------------|-------|--------------|--------|
| Price, No. 1, 2½ inch Cylinder, capacity per stroke, 14 gallon, each..... | 35.00 | 40.00        | 50.00  |
| “ “ 2, 3 “ “ “ “ “ “ 13 “ “ .....                                         | 40.00 | 50.00        | 60.00  |
| “ “ 3, 4 “ “ “ “ “ “ 10 “ “ .....                                         | 55.00 | 67.00        | 80.00  |
| “ “ 4, 4 “ “ “ “ “ “ 1 “ “ .....                                          | 80.00 | 85.00        | 95.00  |

Metallic Valves, extra, \$5.00. Folding Breaks, extra, \$15.00.

HORIZONTAL, DOUBLE-ACTING FORCE PUMP.

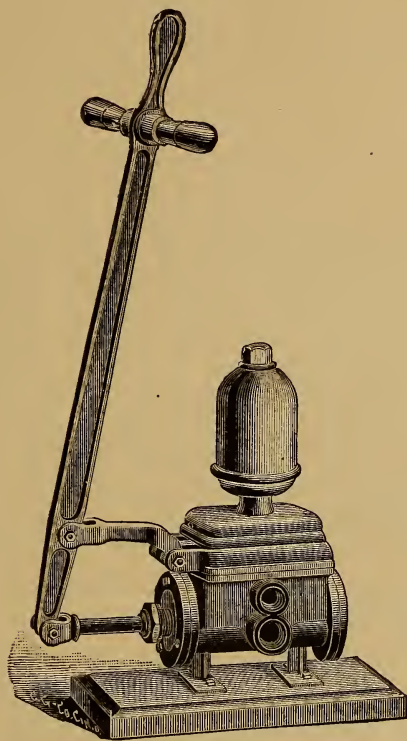


Fig. 781.

Sizes and Prices.

| Number. | Diameter<br>Cylinder. | Double<br>Suction. | Double<br>Discharge. | Stroke. | Capacity per<br>Rev. | Floor Space. | Price. |
|---------|-----------------------|--------------------|----------------------|---------|----------------------|--------------|--------|
| 2       | 2½ inch.              | 1¼ inch.           | 1 inch.              | 5 inch. | ⅕ gals.              | 8 x 20 inch. | 16.00  |
| 4       | 3 "                   | 1¼ "               | 1 "                  | 5 "     | ⅓ "                  | 8 x 20 "     | 18.00  |
| 6       | 3½ "                  | 1½ "               | 1¼ "                 | 5 "     | ⅔ "                  | 8 x 20 "     | 24.00  |
| 8       | 4 "                   | 1½ "               | 1¼ "                 | 5 "     | 1½ "                 | 8 x 20 "     | 31.00  |



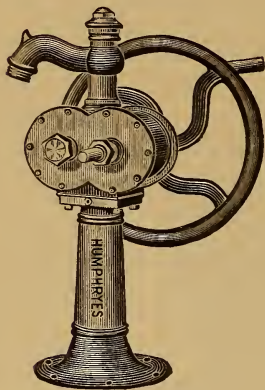


Fig. 782.

HAND ROTARY PUMP.

|               |          |               |       |                         |  |  | Iron. | Bronze. |
|---------------|----------|---------------|-------|-------------------------|--|--|-------|---------|
| Price, No. 1, | 1 1/4    | inch suction, | 1     | inch discharge, each... |  |  | 20.00 | 42.00   |
| " "           | 2, 1 1/4 | "             | 1     | " " " "                 |  |  | 23.00 | 47.00   |
| " "           | 3, 1 1/2 | "             | 1 1/4 | " " " "                 |  |  | 27.00 | 52.00   |
| " "           | 4, 1 1/2 | "             | 1 1/2 | " " " "                 |  |  | 35.00 | 65.00   |
| " "           | 5, 2     | "             | 2     | " " " "                 |  |  | 40.00 | 75.00   |
| " "           | 6, 3     | "             | 2 1/2 | " " " "                 |  |  | 50.00 | 95.00   |

These Pumps are made Anti-Freezing, and are Adaptable to all the Purposes for which LIFT or FORCE Pumps are Used.

The peculiar advantages of our celebrated Rotary Pumps over all others may be briefly stated. The pistons or cams require no packing, and hence cannot get out of order. From the construction of the cams they operate with very little friction, and consequently the least degree of wear. By our application of a patented principle, a uniform strain is brought to bear on all the working parts of the Pump, giving a smooth and easy operation, with an almost total absence of noise, jar and friction. Their compactness, durability and simplicity, and the small amount of labor necessary to work them, render these Pumps eminently fitted for use in hotels, manufactories, railway stations, oil refineries, etc., while their large capacity well adapts them in convenience and utility for pumping out mines, quarries, and other places where there are considerable accumulations of water and it is not practicable to transmit machine power. A thread is cut on the spouts of these Pumps for attaching hose, with which appliance they make a very effective garden or fire engine. We make these Pumps for pumping hot or cold water, oil, spirits or any acetous fluids. We also construct them to order for breweries, distilleries, malt houses, etc. These Pumps, when used for hot liquids, should, when permissible, be made with Iron Case and Bronze Cams in order to provide against the unequal expansion of these parts.

POWER ROTARY FORCE PUMP.

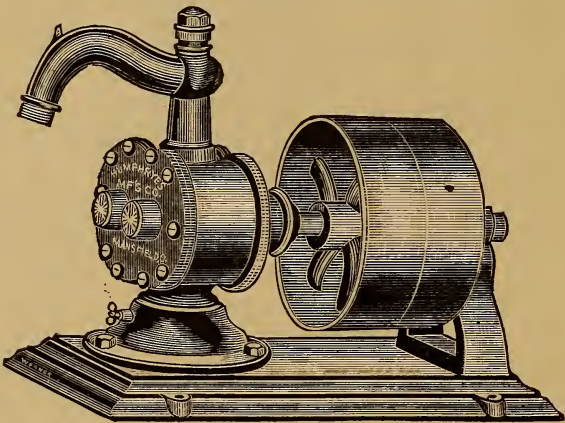


Fig. 783.

The driving shaft is made long enough to put a balance wheel on the end of it, beyond the bearing, so that, *if ordered*, we can furnish the Pump with one at the extra charge named in list. For a small Fire Pump it is admirably suited, and will throw water from 75 to 100 feet horizontally.

|               |          |               |       |                           |  |  | Iron. | Bronze. |
|---------------|----------|---------------|-------|---------------------------|--|--|-------|---------|
| Price, No. 1, | 1 1/4    | inch suction, | 1     | inch discharge, each..... |  |  | 27.00 | 49.00   |
| " "           | 2, 1 1/4 | "             | 1     | " " " "                   |  |  | 32.00 | 56.00   |
| " "           | 3, 1 1/2 | "             | 1 1/4 | " " " "                   |  |  | 38.00 | 63.00   |
| " "           | 4, 1 1/2 | "             | 1 1/2 | " " " "                   |  |  | 48.00 | 78.00   |
| " "           | 5, 2     | "             | 2     | " " " "                   |  |  | 54.00 | 90.00   |
| " "           | 6, 3     | "             | 2 1/2 | " " " "                   |  |  | 65.00 | 110.00  |

Balance wheels for above Pumps, \$1.00, \$2.00 and \$3.00, according to size.

## STEAM BOILER FORCE PUMPS.

On Base, for Hand Use.

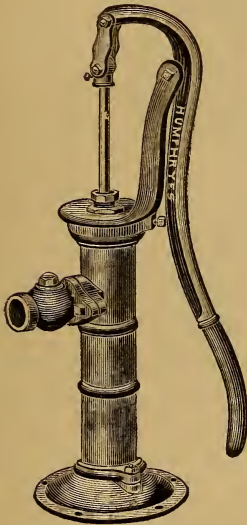


Fig. 784.

With Brackets, for Hand Use.

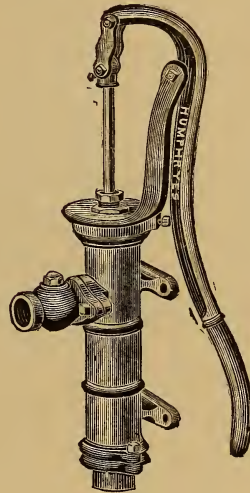


Fig. 785.

These cuts represent our Steam Boiler Feed Pump, for hand use, for supplying boilers under low pressure. They are very generally used in private houses and other buildings heated by low pressure steam. They have revolving Fulcrums and Metallic Fittings for pumping hot as well as cold water.

Sizes and Prices Figs. 784 and 785.

|                                          |       |
|------------------------------------------|-------|
| Price, 2 inch diameter, 1 inch Pipe..... | 12.00 |
| “ 2½ “ 1 and 1¼ inch Pipe.....           | 14.00 |

STEAM BOILER FORCE PUMP.

For Power.

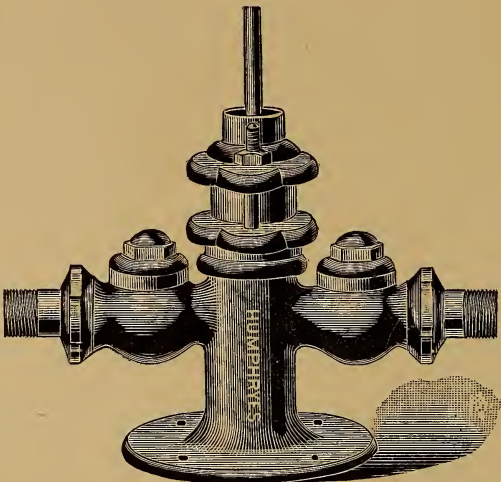


Fig. 786.

|        |        |                      |             |                |       |
|--------|--------|----------------------|-------------|----------------|-------|
| Price. | No. 2, | diameter of Cylinder | 1 1/4 inch, | stroke 6 inch. | 10.00 |
| "      | " 3,   | "                    | 1 1/2 "     | " 6 "          | 15.00 |
| "      | " 4,   | "                    | 1 1/2 "     | " 3 "          | 14.00 |
| "      | " 5,   | "                    | 2 "         | " 3 "          | 18.00 |
| "      | " 6,   | "                    | 2 1/2 "     | " 3 "          | 22.00 |
| "      | " 7,   | "                    | 3 "         | " 3 "          | 27.00 |
| "      | " 8,   | "                    | 2 "         | " 6 "          | 22.00 |
| "      | " 9,   | "                    | 2 1/2 "     | " 6 "          | 30.00 |
| "      | " 10,  | "                    | 3 "         | " 6 "          | 40.00 |

HYDRAULIC PRESSURE PUMP.

For Testing Boilers Pipes, Hose, Etc.

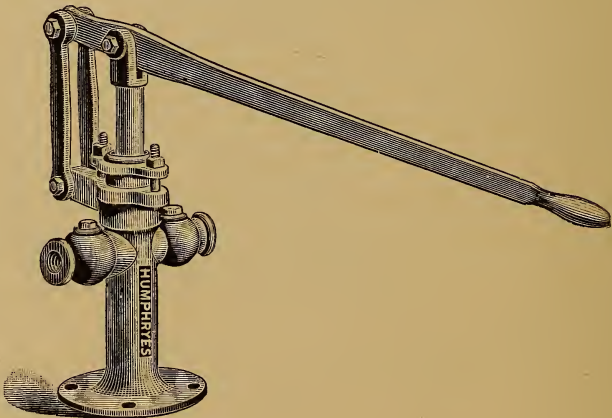


Fig. 787.

Fig. 787 represents our Hydraulic Pressure Pump, constructed with a Wrought Iron Lever, Gun Metal Valves and Piston.

|        |        |                    |         |       |       |
|--------|--------|--------------------|---------|-------|-------|
| Price, | No. 1, | diameter of Piston | 1 inch, | each. | 25.00 |
| "      | " 2,   | "                  | 1 3/8 " | " "   | 30.00 |
| "      | " 3,   | "                  | 2 "     | " "   | 32.00 |



IMPROVED HYDRAULIC RAM.

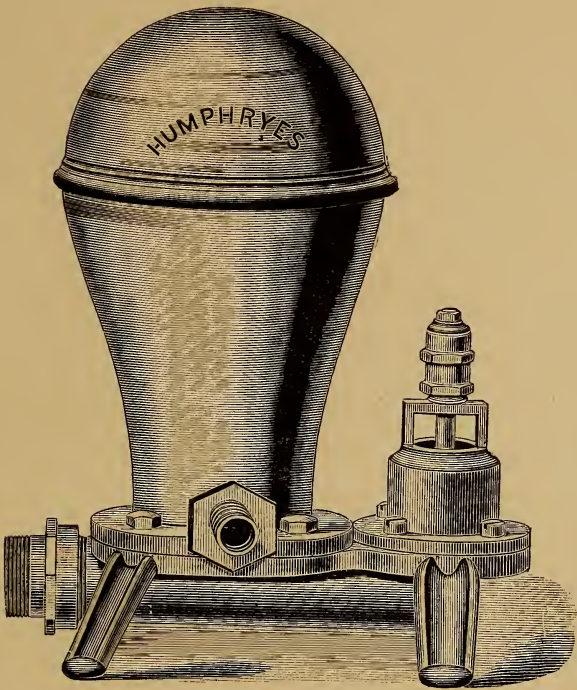


Fig. 788.

Sizes, Capacity and Prices.

| Size,       | Quantity Spring Supplies<br>Per Minute, | Length of Pipes, |                   | Size of Pipes,                            |                  | Revised<br>Price List. |
|-------------|-----------------------------------------|------------------|-------------------|-------------------------------------------|------------------|------------------------|
|             |                                         | Drive,           | Dis'g.            | Drive,                                    | Dis'g.           |                        |
| No. 2 ..... | 1 to 2 gallons                          | 30 to 60 feet.   | To where desired. | $\frac{3}{4}$ inch and $\frac{3}{8}$ inch |                  | 9.00                   |
| " 3 .....   | 2 to 4 "                                | 30 to 60 "       |                   | 1                                         | $\frac{3}{8}$ "  | 11.00                  |
| " 4 .....   | 4 to 8 "                                | 30 to 60 "       |                   | $1\frac{1}{2}$                            | $\frac{1}{2}$ "  | 14.00                  |
| " 5 .....   | 6 to 15 "                               | 30 to 60 "       |                   | 2                                         | 1 "              | 22.00                  |
| " 6 .....   | 8 to 25 "                               | 40 to 75 "       |                   | $2\frac{1}{2}$                            | $1\frac{1}{4}$ " | 40.00                  |
| " 7 .....   | 20 to 40 "                              | 40 to 75 "       |                   | 3                                         | $1\frac{1}{2}$ " | 75.00                  |
| " 8 .....   | 25 to 120 "                             | 40 to 75 "       |                   | 6                                         | $2\frac{1}{2}$ " | 125.00                 |
| " 9 .....   | 80 to 250 "                             | 40 to 75 "       |                   | 9                                         | $3\frac{1}{2}$ " | 225.00                 |

Rule to find how many Gallons of Water per minute can be raised by our Hydraulic Rams.

Multiply the quantity supplied by the Spring (in gallons per minute) by 65. Multiply this product by the "Head," or numbered feet in the fall; then divide by 100 times the height to which the water is to be elevated. The result will give the quantity of water raised per minute in gallons or fractions of gallons.

 For Description see page 294.



## DESCRIPTION OF IMPROVED HYDRAULIC RAM.

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The simple and effective operation of this machine, and its great durability withal, renders it the most useful and valuable apparatus yet developed in the department of hydraulics for elevating water, and conveying it to almost any desired distance, depending, however, on the amount of fall at disposal.

It is practicable where the Spring or Brook is only 18 inches higher than the Ram; yet as the height increases the more powerfully the Ram operates, and its ability to force water to a greater elevation and distance is correspondingly strengthened. The relative height of the Spring or source of supply above the Ram, and the elevation to which it is required to raise, determine the relative proportion between the water raised and wasted—the quantity raised varying according to the height it is conveyed with a given fall; also, the distance the water has to be conducted, and consequent length of Pipes, have some influence on the quantity delivered at the point of discharge, as the more extended the Pipes through which the water has to be forced by the Ram, the more friction there is to be overcome by additional efforts on the part of the machine; notwithstanding, Rams are frequently and successfully employed for driving water a distance of 100 to 200 rods, to an altitude of 100 to 200 feet above the Ram, and severer trials than these even, testify to the indispensability of this almost automatic device. A fall of ten feet from the Brook or Spring to the Ram is abundantly sufficient to raise water to any point less than 150 feet above the location of the machine, while the same amount of fall will also raise water considerably higher, though the supply of water will be proportionately diminished as the height and distance increases. When the requisite quantity of water is forthcoming from the Ram, operating under a certain fall, it is not judicious to give it more fall, for by so doing the strain on the machine is measureably augmented, those parts doing the labor are overtasked, and the durability of the apparatus impaired and lessened.

For ordinary purposes it is sufficient to say, that in conveying water, say 50 or 60 rods, it may be safely calculated that from one-tenth to one-fourteenth of the water can be raised and discharged at an elevation ten times as high as the fall, or one-seventh part of the water can be raised and discharged, say five times as high as the fall applied, and so in like proportion as the fall or height is varied. Thus with a fall of five feet, of every seven gallons drawn from the fountain, one may be raised twenty five feet, or half a gallon fifty feet. Or, with ten feet fall, one gallon of every fourteen may be raised to a height of 100 feet, and so in like proportion as the fall or height is varied.

Where water is to be forced to any very great distance (say more than 75 rods), it is preferable to use a Discharge Pipe of *larger calibre* than named in the Table. With a given supply of water under a great fall, the Ram is not required to be of as large size as for the same quantity of water under a less fall. That is, our No. 4 Ram would be of sufficient capacity for taking water from a Spring or Brook, furnishing seven gallons per minute where the fall was eight or ten feet; when, if there was not over three or four feet fall to the same Spring or Brook, then a No. 5 Ram would be better adapted to the place.

Several Rams can be set so as to play into one Discharge Pipe—each Ram having a separate Drive Pipe applied from the Spring to the Ram.

The size of the Pipes should vary in proportion to the distance the water is to be conveyed, as the greater the distance the larger the Pipe in proportion to the size of the machine. This applies to both the drive and discharge Pipes.

Turns in either drive or discharge Pipe should be avoided if possible. When it is impossible to set the Ram without having elbows in the Pipes, make the elbows as large as may be so as to place as little obstruction to the free and easy flow of the water as is practicable. These machines are made of Iron and Brass. The Valve and Valve Stem are made of Bronze, which has more durable and lasting qualities than any other composition.

By means of an ADJUSTER applied to each of our Rams, the quantity of water drawn from the fountain may be varied at pleasure—thus readily adapting the machine to a *variable supply*.

We furnish Pipe when ordered. Our Rams are fitted for either Wrought Iron Pipe or Lead Pipe.

## CITY BRASS LIFT AND FORCE PUMPS.

On Iron Frame, Right or Left Hand.

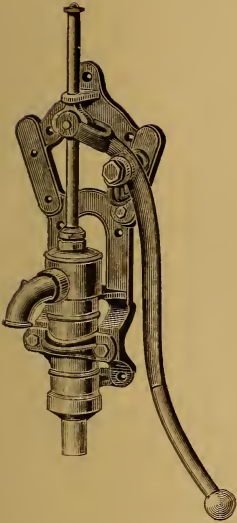


Fig. 789.

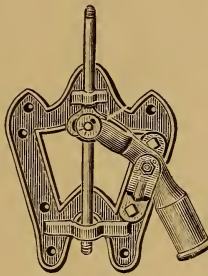


Fig. 790.

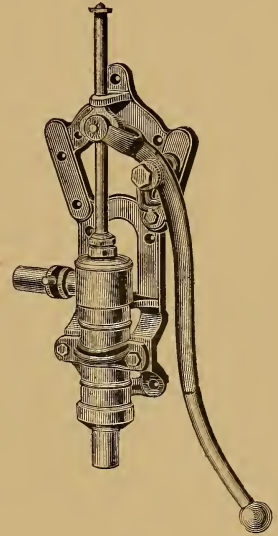


Fig. 791.

The above cuts represent our Figs. 789, 790 and 791 Brass Pumps on iron frame, especially adapted for lifting and forcing small quantities of water to a great height.

These Pumps are well adapted for use in forcing water in buildings in cities where the height is too great for pressure from the street main. The method of setting them can be easily understood by any plumber. The Pump, either Fig. 789 or Fig. 791, can be set down within say 25 feet of the water; continue the Connecting Rod from the top of Pump to the next story, and attach to the Working Rod and Lever shown by Fig. 790 above, from this the Rod can be continued through and into each floor, using Fig. 790 to work one and the same Pump to supply water for each apartment. These Pumps being made on a swivel, they can be placed in any position or angle required. The top of Working Rod is threaded for  $\frac{1}{4}$  inch gas pipe.

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|                                                                                           |      |
|-------------------------------------------------------------------------------------------|------|
| Price, Fig. 789, 2 inch Cylinder, for 1 inch Pipe with Spout for direct Supply, each..... | 7.00 |
| Price, Fig. 790, Iron Extension Frame, each.....                                          | 5.00 |
| Price, Fig. 791, Iron Extension Frame.....                                                | 7.00 |

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Gas Pipe Handles 50 cents extra.

PORTABLE GREENHOUSE PUMP.

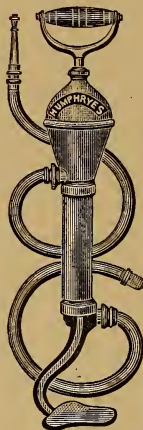


Fig. 792.

The above cut represents our New Double-Acting Hydropult, or Portable Hand Force Pump, fitted with Suction Hose, to draw water or other liquids from a pail or other source of supply, and Discharge Hose, with a Nozzle and Rose Sprinkler for distributing the same for whatever purpose desired.

---

|                                                            |      |
|------------------------------------------------------------|------|
| Price, complete, with Suction Hose and Discharge Pipe..... | 9.00 |
|------------------------------------------------------------|------|

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IMPROVED GAS DRIP PUMP.

FOR GAS COMPANIES.

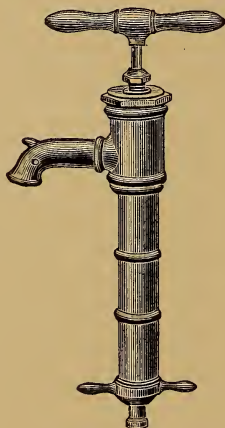


Fig. 793.

It is constructed of brass, has Stuffing Box at top to prevent overflow, and is designed particularly for pumping gas drips. Length of Piston Rods 13 inches. Length of Pump (over all) 24 inches. Diameter of Cylinder (inside) 2 inches. Fitted for  $\frac{3}{4}$  or 1 inch iron pipe as ordered.

---

|           |       |
|-----------|-------|
| Price.... | 15.00 |
|-----------|-------|

---

## PUMP REPAIRS.

## Levers or Handles.

|                                                                  |      |
|------------------------------------------------------------------|------|
| Cistern Pumps, Nos. 0, 1 and 2.....                              | .50  |
| “ “ “ 3 .....                                                    | .60  |
| “ “ “ 4 .....                                                    | .70  |
| “ “ “ 5 .....                                                    | 1.00 |
| “ “ “ 6 .....                                                    | 1.25 |
| Pitcher Spout Pump, Nos. 1, 2, 3 and 4....                       | .60  |
| “ “ “ 5, .....                                                   | .75  |
| Set Length Pumps, and Standards, plain....                       | .90  |
| “ “ “ “ tight top .....                                          | 1.25 |
| “ “ Force Pumps and Standards.....                               | 1.25 |
| Wind-Mill Pumps, plain, Nos. 1, 3 and 4,<br>6 inch stroke.....   | 1.25 |
| Wind-Mill Pumps, plain, Nos. 1, 3, and 4,<br>10 inch stroke..... | 1.50 |
| Wind-Mill Pumps, plain, Nos. 5 and 6,<br>6 inch stroke.....      | 1.35 |
| Wind-Mill Pumps, plain, Nos. 5 and 6,<br>10 inch stroke.....     | 1.60 |
| Wind-Mill Pumps, Force, 6 inch stroke.....                       | 1.50 |
| “ “ “ 10 inch stroke ....                                        | 1.75 |
| Deep Well Pumps.....                                             | 2.00 |
| House Force Pumps, small.....                                    | 1.00 |
| “ “ “ large.....                                                 | 1.50 |

## Fulcrums or Bearers.

|                                                              |      |
|--------------------------------------------------------------|------|
| Cistern Pumps, Nos. 0, 1 and 2 .....                         | .70  |
| “ “ “ 3 .....                                                | .75  |
| “ “ “ 4 .....                                                | .80  |
| “ “ “ 5 .....                                                | 1.00 |
| “ “ “ 6 .....                                                | 1.10 |
| Pitcher Spout Pumps, Nos. 1 and 2.....                       | .40  |
| “ “ “ 3 and 4.....                                           | .50  |
| “ “ “ 5 .....                                                | .60  |
| Set Length Pumps and Standards, plain....                    | .80  |
| “ “ “ “ tight top .....                                      | 1.25 |
| “ “ “ “ force ...                                            | 1.25 |
| Wind-Mill Pumps, plain, Nos. 3 and 4,<br>6 inch stroke.....  | 1.25 |
| Wind-Mill Pumps, plain, Nos. 3 and 4,<br>10 inch stroke..... | 1.50 |
| Wind-Mill Pumps, plain, Nos. 5 and 6,<br>6 inch stroke.....  | 1.50 |
| Wind-Mill Pumps, plain, Nos. 5 and 6,<br>10 inch stroke..... | 1.75 |
| Wind Mill Pumps, force, 6 inch stroke.....                   | 2.00 |
| “ “ “ 10 “ .....                                             | 2.50 |
| Deep Well Pumps.....                                         | 2.00 |
| House Force Pumps, small.....                                | 1.00 |
| “ “ “ large.....                                             | 1.50 |

## Plungers, with Rods.

|                                 |      |
|---------------------------------|------|
| Cistern Pumps, No. 0.....       | .70  |
| “ “ “ 1.....                    | .75  |
| “ “ “ 2.....                    | .80  |
| “ “ “ 3.....                    | .90  |
| “ “ “ 4.....                    | 1.00 |
| “ “ “ 5.....                    | 1.15 |
| “ “ “ 6.....                    | 1.30 |
| Pitcher Spout Pumps, No. 1..... | .75  |
| “ “ “ 2.....                    | .85  |
| “ “ “ 3.....                    | .90  |
| “ “ “ 4.....                    | 1.00 |
| “ “ “ 5.....                    | 1.20 |

## Plungers Only, No Rods.

|                                                        |                       |                 |                 |                 |                 |
|--------------------------------------------------------|-----------------------|-----------------|-----------------|-----------------|-----------------|
| Inches.....                                            | 2 and 2 $\frac{1}{4}$ | 2 $\frac{1}{2}$ | 2 $\frac{3}{4}$ | 3               | 3 $\frac{1}{2}$ |
| 10 inch Cylinders.....                                 | .70                   | .75             | .80             | .85             | .90             |
| 12 and 14 “ .....                                      | 2.00                  | 2.10            | 2.20            | 2.30            | 2.45            |
| 16 inch “ .....                                        | 2.30                  | 2.45            | 2.70            | 2.95            | 3.20            |
| Inches.....                                            |                       |                 |                 | 3 $\frac{1}{2}$ | 4               |
| 10 inch Cylinders.....                                 |                       |                 |                 | 1.00            | 1.25            |
| 12 and 14 “ .....                                      |                       |                 |                 | 2.70            | 3.20            |
| 16 inch “ .....                                        |                       |                 |                 | 3.45            | 3.95            |
| House Force Pumps, small .....                         |                       |                 |                 |                 | 1.00            |
| “ “ “ Iron, large, Nos. 1 and 2..                      |                       |                 |                 |                 | 1.00            |
| “ “ “ “ 3 and 4..                                      |                       |                 |                 |                 | 1.50            |
| “ “ “ (brass), large, Nos.<br>1 and 2.....             |                       |                 |                 |                 | 2.25            |
| House Force Pumps (brass), large, Nos.<br>3 and 4..... |                       |                 |                 |                 | 2.75            |

## Pump Cylinders or Bodies.

|                                           |      |
|-------------------------------------------|------|
| Cistern Pumps, Nos. 0 and 1. ....         | 1.25 |
| “ “ “ 2 .....                             | 1.50 |
| “ “ “ 3 .....                             | 1.75 |
| “ “ “ 4 .....                             | 2.00 |
| “ “ “ 5 .....                             | 2.25 |
| “ “ “ 6 .....                             | 2.50 |
| Pitcher Spout Pumps, No. 1.....           | 1.50 |
| “ “ “ 2.....                              | 1.75 |
| “ “ “ 3.....                              | 2.00 |
| “ “ “ 4.....                              | 2.25 |
| “ “ “ 5.....                              | 2.50 |
| Iron House Force Pump, small 2 inch.....  | 3.00 |
| “ “ “ “ 2 $\frac{1}{2}$ and 3 .....       | 4.00 |
| “ “ “ “ 3 $\frac{1}{2}$ “ .....           | 6.00 |
| “ “ “ “ 4 “ .....                         | 6.50 |
| Iron House Force Pumps, large, 2 inch.... | 3.50 |
| “ “ “ “ 2 $\frac{1}{2}$ “ .....           | 4.00 |
| “ “ “ “ 3 “ .....                         | 4.50 |
| “ “ “ “ 3 $\frac{1}{2}$ “ .....           | 6.00 |
| “ “ “ “ 4 “ .....                         | 7.50 |

For price of Brass Cylinders, double above list.

## Bases.

|                                                       |      |
|-------------------------------------------------------|------|
| Cistern Pumps, Nos. 0, 1 and 2.....                   | .75  |
| “ “ “ 3 .....                                         | .85  |
| “ “ “ 4 .....                                         | 1.00 |
| “ “ “ 5 .....                                         | 1.15 |
| “ “ “ 6 .....                                         | 1.25 |
| Pitcher Spout Pumps, No. 1.....                       | 1.00 |
| “ “ “ 2.....                                          | 1.10 |
| “ “ “ 3.....                                          | 1.25 |
| “ “ “ 4.....                                          | 1.50 |
| “ “ “ 5.....                                          | 1.75 |
| House Force Pump, small, 2 and 2 $\frac{1}{2}$ inch.. | 1.00 |
| “ “ “ “ 3 “ .....                                     | 1.25 |
| “ “ “ “ 3 $\frac{1}{2}$ and 4 “ ..                    | 1.50 |

## Shell or Body of Cylinder—Iron.

|                                                   |      |
|---------------------------------------------------|------|
| 10 inch Cylinder, 2 and 2 $\frac{1}{4}$ inch..... | 1.50 |
| 10 “ “ 2 $\frac{1}{2}$ inch.....                  | 1.60 |
| 10 “ “ 2 $\frac{3}{4}$ “ .....                    | 1.80 |
| 10 “ “ 3 “ .....                                  | 2.00 |
| 10 “ “ 3 $\frac{1}{4}$ “ .....                    | 2.25 |
| 10 “ “ 3 $\frac{1}{2}$ “ .....                    | 2.50 |
| 10 “ “ 4 “ .....                                  | 3.25 |



# PUMP REPAIRS.

## Shell or Body of Cylinder—Iron

*Continued.*

|                                              |      |
|----------------------------------------------|------|
| 12 and 14 inch Cylinder, $2\frac{1}{4}$ inch | 2.30 |
| 12 " 14 " " $2\frac{1}{2}$ "                 | 2.45 |
| 12 " 14 " " $2\frac{3}{4}$ "                 | 2.55 |
| 12 " 14 " " 3 "                              | 2.70 |
| 12 " 14 " " $3\frac{1}{4}$ "                 | 3.00 |
| 12 " 14 " " $3\frac{1}{2}$ "                 | 3.25 |
| 12 " 14 " " 4 "                              | 3.80 |
| 16 inch Cylinder, $2\frac{1}{4}$ inch        | 2.80 |
| 16 " " $2\frac{1}{2}$ "                      | 3.05 |
| 16 " " $2\frac{3}{4}$ "                      | 3.30 |
| 16 " " 3 "                                   | 3.55 |
| 16 " " $3\frac{1}{4}$ "                      | 3.80 |
| 16 " " $3\frac{1}{2}$ "                      | 4.00 |
| 16 " " 4 "                                   | 4.30 |

## BRASS BODY.

|                                       |      |
|---------------------------------------|------|
| 10 inch Cylinder, $2\frac{1}{4}$ inch | 3.75 |
| 10 " " $2\frac{1}{2}$ "               | 4.00 |
| 10 " " $2\frac{3}{4}$ "               | 4.25 |
| 10 " " 3 "                            | 4.50 |
| 12 " " $2\frac{1}{4}$ "               | 4.25 |
| 12 " " $2\frac{1}{2}$ "               | 4.50 |
| 12 " " $2\frac{3}{4}$ "               | 4.75 |
| 12 " " 3 "                            | 5.00 |

## Cylinder Top and Bottom Attachments or Caps.

|                                               |     |
|-----------------------------------------------|-----|
| All sizes up to and including 3 in. Cylinder. | .75 |
| $3\frac{1}{4}$ to 4 inch Cylinder.            | .90 |

## Stocks or Standards Only.

|                                       |      |
|---------------------------------------|------|
| Well Pumps                            | 3.00 |
| " Force Pumps                         | 4.00 |
| Wind-mill Pumps, plain, Nos. 3 and 4. | 4.25 |
| " " " 5 and 6.                        | 4.75 |
| " " force                             | 7.50 |
| " Pump Standards                      | 9.00 |

## Lower Valves.

|                                  |     |
|----------------------------------|-----|
| Cistern Pumps                    | .25 |
| Pitcher Spout Pumps              | .35 |
| Well Pumps                       | .25 |
| Set Length Force Pumps           | .30 |
| Hand Force Pumps                 | .25 |
| Iron and Brass House Force Pumps | .25 |
| Syphon Pumps                     | .35 |

## Brass Valve Seats.

|                                                     |      |
|-----------------------------------------------------|------|
| Cistern Pumps, Nos. 0, 1, 2, 3 and 4.               | .75  |
| " " " 5                                             | 1.00 |
| " " " 6                                             | 1.25 |
| Pitcher Spout Pumps, No. 1                          | .75  |
| " " " 2                                             | .90  |
| " " " 3                                             | 1.00 |
| " " " 4                                             | 1.20 |
| " " " 5                                             | 1.30 |
| Well and Well Force Pumps                           | 1.00 |
| Hand and House Force Pumps up to $2\frac{1}{2}$ in. | 1.00 |
| " " " over $2\frac{1}{2}$ in.                       | 1.25 |

## Brass Soldering Tubes.

|                                    |      |
|------------------------------------|------|
| For 1 and $1\frac{1}{4}$ inch pipe | .50  |
| " $1\frac{1}{2}$ inch pipe         | .75  |
| " 2 " "                            | 1.00 |

## Iron Pipe Nuts, for Cistern and Pitcher Spout Pumps, Spout and Air Chamber Nuts.

|                               |     |
|-------------------------------|-----|
| For 1 and $1\frac{1}{4}$ inch | .35 |
| " $1\frac{1}{2}$ inch         | .45 |
| " above 2 inch                | .50 |

## Cross Heads, Including Nuts Set Screws, and Links.

|                     |     |
|---------------------|-----|
| For all style Pumps | .75 |
|---------------------|-----|

## Caps and Stuffing Boxes.

|                               | Cap. | S. Box. |
|-------------------------------|------|---------|
| Deep Well Pumps               | .75  | .50     |
| Set Length Force              | .50  | .75     |
| Hand Force, 2 inch            | .50  | .75     |
| " " $2\frac{1}{2}$ and 3 inch | .50  | 1.00    |
| " " $3\frac{1}{2}$ and 4 "    | .65  | 1.00    |
| Iron House Force Pumps        | .65  | 1.00    |
| Brass " " "                   | 2.25 | 1.00    |

## Brass Stuffing Bowls.

|                       |      |
|-----------------------|------|
| For House Force Pumps | 1.25 |
|-----------------------|------|

## Air Chambers.

|                 |      |
|-----------------|------|
| Deep Well Force | 3.00 |
| Set Length "    | 2.50 |
| Syphon Pump     | 6.00 |

## Piston and Connecting Rods.

|                               | Iron. | Brass. |
|-------------------------------|-------|--------|
| For Well and Hand Force Pumps | .60   | 1.00   |
| " House Force Pumps           | .60   | 1.50   |
| " Syphon "                    | 1.75  | 2.50   |

## Plunger Valves.

|                                | Iron. | Brass. |
|--------------------------------|-------|--------|
| $3\frac{1}{4}$ inches and less | .20   | .35    |
| $3\frac{1}{2}$ " " over        | .35   | .50    |

## Miscellaneous Pump Repairs.

|                                                         |      |
|---------------------------------------------------------|------|
| Braces                                                  | .50  |
| Spouts                                                  | .50  |
| Yoke and Link                                           | .75  |
| Valve Cases or Funnels for Hand Force Pumps             | .80  |
| Gas Pipe Flange for Syphon Pump                         | .90  |
| Base for Syphon Pump                                    | 1.00 |
| Inside Cylinder for Syphon Pump                         | 6.00 |
| Outside Shell " "                                       | 4.00 |
| Bearer Bolt and Brass Nut for House Force Pump          | .75  |
| Connecting Slide for Wind-Mill Attachment               | .50  |
| Sleeve for Round Rod of Wind-Mill Pumps                 | .50  |
| Turned Malleable Pins for " "                           | .15  |
| Lower Section with Pipe Flange for Three-way Pumps      | 8.00 |
| Platform Section for Three-Way Pump                     | 2.50 |
| Goose Neck " " "                                        | .60  |
| Oscillating Fulcrum for Wind-Mill Pumps, 6 inch stroke  | .50  |
| Oscillating Fulcrum for Wind-Mill Pumps, 10 inch stroke | .75  |

## DRIVE WELL POINTS.

### ROUSE PATENT MALLEABLE POINT.

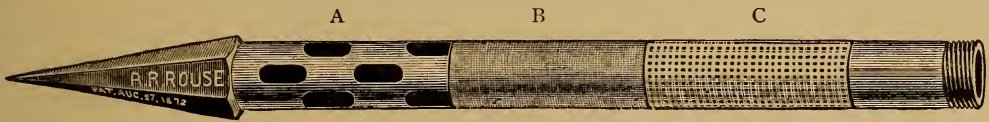


Fig 794.

The accompanying cut is an illustration on the Improved Well Point. *A* showing the openings (for admitting water) before the wire cloth or Perforated Brass is soldered on. *B* showing section after wire cloth has been soldered on. *C* showing section after both wire cloth and perforated brass have been soldered on. These Points are Electro-Plated with Pure Block Tin inside and outside before receiving the coverings, there being no raw iron to corrode or rust or cause an unpleasant taste to the water.

|                            |                            |       |
|----------------------------|----------------------------|-------|
| Price, 1 inch Calibre..... | Price, 2½ inch Calibre.... | 9.00  |
| " 1¼ " " .....             | " 3 " " .....              | 12.00 |
| " 1½ " " .....             | " 4 " " .....              | 35.00 |
| " 2 " " .....              |                            |       |
| .....                      | 6.00                       |       |

The 1¼ Point is 2½ inches long and has twenty-four 1¼ by ¾ openings. This is equal to 536 one-fourth inch drilled holes (commonly in Gas Pipe Point), or equal to 342 five-sixteenth holes or 239 three-eighth drilled holes. So it is plain to be seen that the capacity of the Point is three to one greater than in any other in use, not barring length.

We recommend it as the best Point made.

### BRASS JACKET POINT.



Fig. 795.

This Point is made of a Perforated Tube, covered with wire cloth, or gauze, and protected by a Perforated Metallic Shield or covering.

For Sizes and Prices see page 300.

### WASHER POINT.



Fig. 796.

This Point is made by counterboring the perforations and placing in them wire gauze, protected by brass washers. It has no superior in the market, being simple and plain, and capable of enduring more rough usage than almost any other Point made.

For Sizes and Prices see page 300.

SIZES AND PRICES OF DRIVE WELL POINTS.

No. 60 Gauze being the Standard.

| Inside Diameter. | Length.        | No. of Holes, and Price. | No. of Holes, and Price. | No. of Holes, and Price. | No. of Holes, and Price. | No. of Holes, and Price. | Extra Net Price for Gauze. |        |
|------------------|----------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----------------------------|--------|
|                  |                |                          |                          |                          |                          |                          | No. 80                     | No. 90 |
| 1¼               | 20 inch..... } | 40<br>3.00               | 50<br>3.25               | 60<br>3.50               | .....                    | .....                    | .40                        | .60    |
| 1¼               | 24 inch..... } | 80<br>4.00               | 100<br>4.50              | 120<br>5.00              | .....                    | .....                    | .40                        | .60    |
| 1¼               | 30-inch..... } | 80<br>5.00               | 100<br>5.50              | 120<br>6.00              | 140<br>6.50              | .....                    | .55                        | .80    |
| 1¼               | 36-inch..... } | 100<br>6.00              | 120<br>6.50              | 140<br>7.00              | 160<br>7.50              | .....                    | .70                        | 1.00   |
| 1¼               | 42-inch..... } | 120<br>7.00              | 140<br>7.50              | 160<br>8.00              | 180<br>8.50              | .....                    | .80                        | 1.20   |
| 1¼               | 48-inch..... } | 120<br>7.50              | 140<br>8.00              | 160<br>8.50              | 180<br>9.00              | 200<br>9.50              | .95                        | 1.40   |
| 1½               | 24-inch..... } | 80<br>6.00               | 100<br>6.75              | 120<br>7.50              | .....                    | .....                    | .45                        | .70    |
| 1½               | 30-inch..... } | 80<br>7.50               | 100<br>8.25              | 120<br>9.00              | 140<br>9.75              | .....                    | .70                        | .95    |
| 1½               | 36-inch..... } | 100<br>9.00              | 120<br>9.75              | 140<br>10.50             | 160<br>10.75             | .....                    | .80                        | 1.15   |
| 1½               | 42-inch..... } | 120<br>10.50             | 140<br>10.75             | 160<br>12.00             | 180<br>12.75             | .....                    | .95                        | 1.40   |
| 1½               | 48-inch..... } | 120<br>11.25             | 140<br>12.00             | 160<br>12.75             | 180<br>13.50             | 200<br>14.25             | 1.10                       | 1.60   |
| 2                | 30 inch..... } | 200<br>12.00             | 250<br>14.00             | 300<br>16.00             | .....                    | .....                    | .....                      | .....  |
| 2                | 36-inch..... } | 250<br>15.00             | 300<br>17.00             | 350<br>19.00             | .....                    | .....                    | .....                      | .....  |
| 2                | 48-inch..... } | 300<br>20.00             | 350<br>22.00             | 400<br>24.00             | .....                    | .....                    | .....                      | .....  |
| 2½               | 36-inch..... } | 300<br>20.00             | 350<br>22.00             | 400<br>24.00             | .....                    | .....                    | .....                      | .....  |
| 2½               | 48-inch..... } | 350<br>24.00             | 400<br>26.00             | 450<br>28.00             | .....                    | .....                    | .....                      | .....  |
| 2½               | 60-inch..... } | 400<br>28.00             | 450<br>30.00             | 500<br>32.00             | .....                    | .....                    | .....                      | .....  |
| 3                | 36-inch..... } | 350<br>25.00             | 400<br>27.50             | 450<br>30.00             | .....                    | .....                    | .....                      | .....  |
| 3                | 48 inch..... } | 400<br>30.00             | 450<br>32.50             | 500<br>35.00             | .....                    | .....                    | .....                      | .....  |
| 3                | 60 inch..... } | 450<br>35.00             | 500<br>37.50             | 600<br>42.00             | .....                    | .....                    | .....                      | .....  |
| 4                | 48 inch..... } | 500<br>40.00             | 600<br>45.00             | .....                    | .....                    | .....                    | .....                      | .....  |
| 4                | 60-inch..... } | 500<br>45.00             | 600<br>50.00             | 700<br>55.00             | .....                    | .....                    | .....                      | .....  |
| 4                | 72-inch..... } | 600<br>50.00             | 700<br>55.00             | 800<br>60.00             | .....                    | .....                    | .....                      | .....  |



STRAINER FOR WROUGHT IRON PIPE.

|                                         |     |
|-----------------------------------------|-----|
| Price, 1 and 1¼ inch Plain, each.....   | .25 |
| Price, 1 and 1¼ inch Gauze Covered..... | .40 |

Fig. 797.

WIRE CLOTH.

Price List of Regular Market Grade of Brass Wire Cloth.

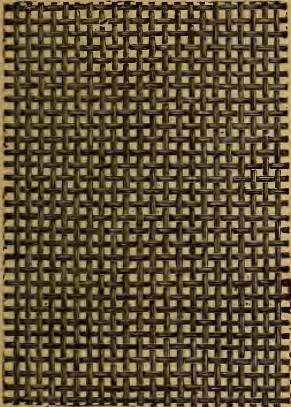


Fig. 798.

| Price, No. | 2 Mesh, Brass Wire Cloth, from No. | 16 Wire, per sq. ft. |  |
|------------|------------------------------------|----------------------|--|
| 3          | 17                                 | .50                  |  |
| 4          | 18                                 | .50                  |  |
| 5          | 19                                 | .50                  |  |
| 6          | 20                                 | .50                  |  |
| 8          | 22                                 | .50                  |  |
| 10         | 23                                 | .50                  |  |
| 12         | 24                                 | .50                  |  |
| 14         | 25                                 | .50                  |  |
| 16         | 26                                 | .50                  |  |
| 18         | 27                                 | .50                  |  |
| 20         | 28                                 | .50                  |  |
| 22         | 29                                 | .50                  |  |
| 24         | 30                                 | .52                  |  |
| 30         | 31                                 | .55                  |  |
| 40         | 33                                 | .58                  |  |
| 50         | 35                                 | .50                  |  |
| 60         | 36                                 | .60                  |  |
| 70         | 37                                 | .70                  |  |
| 80         | 38                                 | .90                  |  |
| 90         | 39                                 | 1.10                 |  |
| 100        | 40                                 | 1.30                 |  |

PERFORATED SHEET BRASS.

One-eighth inch Perforations.

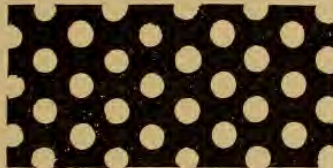


Fig. 799.

This Brass is rolled to order in widths just right to cover the different sizes of points

Prices per Lineal Foot.

|                                                             |     |
|-------------------------------------------------------------|-----|
| Price, 4¾ inch Wide for 1 inch Points, per lineal foot..... | .13 |
| “ 5¾ “ “ “ 1¼ “ “ “ “ “ “ .....                             | .16 |
| “ 6 “ “ “ “ 1½ “ “ “ “ “ “ .....                            | .18 |
| “ 7½ “ “ “ “ 2 “ “ “ “ “ “ .....                            | .23 |
| “ 9¾ “ “ “ “ 2½ “ “ “ “ “ “ .....                           | .28 |
| “ 10¾ “ “ “ “ 3 “ “ “ “ “ “ .....                           | .32 |
| “ 12 “ “ “ “ “ “ “ “ “ “ “ .....                            | .36 |
| “ 14 “ “ “ “ “ “ “ “ “ “ “ .....                            | .42 |

FLOAT VALVES FOR TANKS.



Fig. 800.



Fig. 801.

|                  |     |                  |     |
|------------------|-----|------------------|-----|
| Price, each..... | .80 | Price, each..... | .80 |
|------------------|-----|------------------|-----|



WELL TOOLS AND MACHINERY.



Fig. 802.

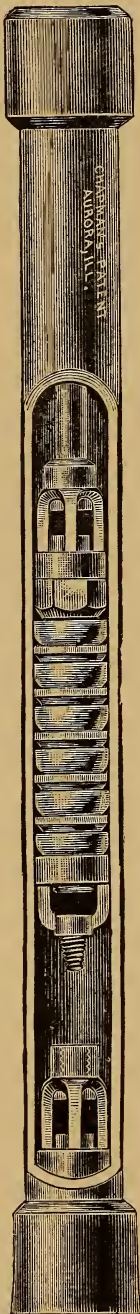


Fig. 803.

TUBULAR WELL WORKING CYLINDERS.

|                         |       |       |       |       |       |       |       |       |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Size, inches.....       | 1¾    | 2     | 2½    | 3     | 4     | 4½    | 5     | 6     |
| Price, Fig. 802, each . | 10.00 | 11.00 | 14.00 | 20.00 | 33.00 | 42.00 | 50.00 | 85.00 |
| Add for Brass Lining.   | 3.00  | 2.00  | 4.00  | 5.00  | 9.00  | 20.00 | 25.00 | 40.00 |

|                             |       |       |       |       |        |        |        |
|-----------------------------|-------|-------|-------|-------|--------|--------|--------|
| Size, inches .....          | 2     | 2½    | 3     | 4     | 4½     | 5      | 6      |
| Price, Fig. 803, each... .. | 20.00 | 28.00 | 40.00 | 80.00 | 100.00 | 120.00 | 150.00 |
| Add for Brass Lining .....  | 5.00  | 7.00  | 10.00 | 15.00 | 20.00  | 25.00  | 30.00  |

|                                                      |       |       |       |       |       |       |       |
|------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|
| Size, inches .....                                   | 2     | 2½    | 3     | 4     | 4½    | 5     | 6     |
| Price, Fig. 803 of Seamless Drawn Brass Tube, each . | 10.50 | 14.50 | 22.00 | 43.50 | 56.00 | 66.00 | 72.00 |



Fig. 804.



Fig. 805.



Fig. 806.

CHAPMAN TUBULAR WELL VALVE.

|                                      |      |      |       |       |       |       |
|--------------------------------------|------|------|-------|-------|-------|-------|
| Size, inches .....                   | 2    | 2½   | 3     | 4     | 5     | 6     |
| Price, Per Set, Figs. 804 and 805... | 6.00 | 9.00 | 12.00 | 30.00 | 50.00 | 72.00 |

BRASS CYLINDER FOR INSIDE OF PIPE WELLS,  
With Valve Complete.

|                             |       |       |       |       |       |       |       |
|-----------------------------|-------|-------|-------|-------|-------|-------|-------|
| Size, inches.....           | 2     | 2½    | 3     | 4     | 4½    | 5     | 6     |
| Price, Fig. 806, each ..... | 10.00 | 13.00 | 17.00 | 33.00 | 42.00 | 50.00 | 85.00 |

PADDY DRILL.

Closed.

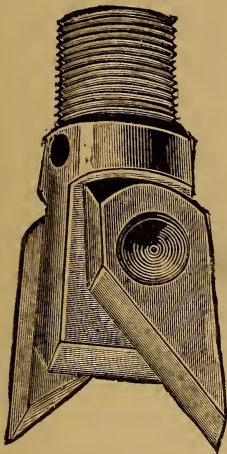


Fig. 807.

Expanded.

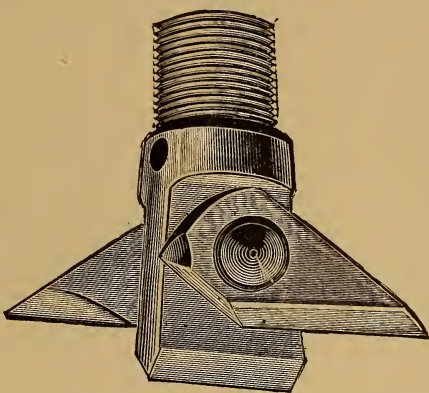


Fig. 808.

|                    |      |       |         |   |                |       | Steel<br>Wings. | Rivets. |
|--------------------|------|-------|---------|---|----------------|-------|-----------------|---------|
| Price, Fig. 808, 2 | inch | Paddy | makes a | 4 | inch hole..... | 5.00  | 1.50            | .25     |
| "                  | "    | 2½    | "       | " | 4½             | 6.50  | 2.25            | .30     |
| "                  | "    | 3     | "       | " | 5              | 8.50  | 2.75            | .35     |
| "                  | "    | 4     | "       | " | 6½             | 11.00 | 3.75            | .50     |
| "                  | "    | 5     | "       | " | 8              | 15.00 | 5.50            | .75     |
| "                  | "    | 5½    | "       | " | 8              | 20.00 | 6.00            | .....   |
| "                  | "    | 6     | "       | " | 8              | 25.00 | 7.00            | 1.00    |
| "                  | "    | 7     | "       | " | 9              | 32.00 | 8.00            | 1.10    |
| "                  | "    | 8     | "       | " | 10             | 40.00 | 9.00            | 1.25    |

EXPANSION DRILL.

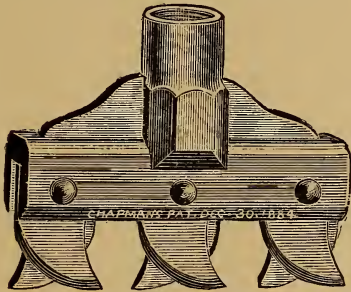


Fig. 809.

|                                                         |   |   |    |   |    |       |        |
|---------------------------------------------------------|---|---|----|---|----|-------|--------|
| Price, Fig. 809, for 6 inch hole fitted for 2 inch pipe |   |   |    |   |    | 20.00 |        |
| "                                                       | " | " | 7  | " | 2½ | "     | 23.00  |
| "                                                       | " | " | 8  | " | 2½ | "     | 25.00  |
| "                                                       | " | " | 9  | " | 2½ | "     | 30.00  |
| "                                                       | " | " | 10 | " | 2½ | "     | 40.00  |
| "                                                       | " | " | 12 | " | 2½ | "     | 55.00  |
| "                                                       | " | " | 16 | " | 3  | "     | 75.00  |
| "                                                       | " | " | 20 | " | 3  | "     | 110.00 |
| "                                                       | " | " | 24 | " | 4  | "     | 150.00 |
| "                                                       | " | " | 30 | " | 4½ | "     | 210.00 |
| "                                                       | " | " | 36 | " | 4½ | "     | 265.00 |

|                                  |      |      |      |      |      |      |      |      |      |      |      |
|----------------------------------|------|------|------|------|------|------|------|------|------|------|------|
| Wings for Fig. 809, inches.....  | 6    | 7    | 8    | 9    | 10   | 12   | 16   | 20   | 24   | 30   | 36   |
| Price, each.....                 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.50 | 3.00 | 3.50 | 3.50 | 3.50 | 3.50 |
| Rivets for Fig. 809, inches..... | 6    | 7    | 8    | 9    | 10   | 12   | 16   | 20   | 24   | 30   | 36   |
| Price, each.....                 | .50  | .50  | .50  | .50  | .50  | .65  | .75  | .75  | .75  | .75  | .75  |

HYDRAULIC AND JETTING PUMP DRILLS.

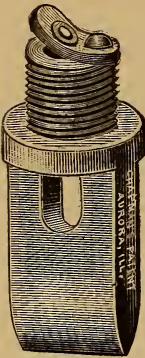


Fig. 810.



Fig. 811.



Fig. 812



Fig. 813.



Fig. 814.

|                                            |                 |       |
|--------------------------------------------|-----------------|-------|
| Price, Fig. 810, Best Forged Cast Steel, 2 | inch, each..... | 4.00  |
| “ “ “ “ “ “ 2½                             | “ “ .....       | 5.00  |
| “ “ “ “ “ “ 3                              | “ “ .....       | 6.00  |
| “ “ “ “ “ “ 4                              | “ “ .....       | 8.00  |
| “ “ “ “ “ “ 5                              | “ “ .....       | 10.00 |
| “ “ “ “ “ “ 6                              | “ “ .....       | 12.00 |

|                                     |       |
|-------------------------------------|-------|
| Price, Fig. 811, 1⅞ inch, each..... | 10.00 |
| “ “ 2⅜ “ “ .....                    | 12.00 |
| “ “ 2⅞ “ “ .....                    | 15.00 |
| “ “ 3⅞ “ “ .....                    | 18.00 |

|                                            |                                        |       |
|--------------------------------------------|----------------------------------------|-------|
| Price, Fig. 812, Best Forged Cast Steel, 2 | inch for Ball or Bolt Valve, each..... | 4.00  |
| “ “ “ “ “ “ 2½                             | “ “ “ “ “ “ .....                      | 5.00  |
| “ “ “ “ “ “ 3                              | “ “ “ “ “ “ .....                      | 6.00  |
| “ “ “ “ “ “ 4                              | “ “ “ “ “ “ .....                      | 8.00  |
| “ “ “ “ “ “ 5                              | “ “ “ “ “ “ .....                      | 10.00 |
| “ “ “ “ “ “ 6                              | “ “ “ “ “ “ .....                      | 12.00 |

|                                                                    |      |
|--------------------------------------------------------------------|------|
| Price, Fig. 813, Cast Steel, 2 inch, with Clapper Valve, each..... | 2.00 |
| “ “ “ “ 3 “ “ “ “ “ “ .....                                        | 4.00 |

|                                    |                                            |      |
|------------------------------------|--------------------------------------------|------|
| Price, Fig. 814, No. 1, for 1      | inch Coupling, 1¼ inch bit, net, each..... | 1.25 |
| “ “ “ 2, “ 1¼ “ “ 2 “ “ “ “ .....  | 3.00                                       |      |
| “ “ “ 3, “ 1½ “ “ 2½ “ “ “ “ ..... | 4.50                                       |      |
| “ “ “ 4, “ 2 “ “ 3 “ “ “ “ .....   | 6.50                                       |      |



DRILL FOR TUBULAR WORK.



Fig. 815.

|                     |      |
|---------------------|------|
| Price, 2 inch ..... | 7.50 |
|---------------------|------|

DRILL FOR ARTESIAN WORK.



Fig. 816.

|                    |       |
|--------------------|-------|
| Price, 2 inch..... | 14.00 |
| “ 2½ “ .....       | 16.00 |
| “ 3 “ .....        | 20.00 |

STEEL SHOES.

To Protect Lower End of Pipe when Driving.

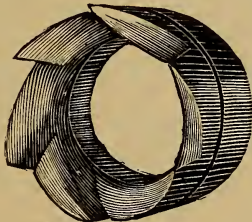


Fig. 817.

We always send these Shoes with a plain edge, instead of saw edge as shown, unless otherwise ordered.

|                   |      |      |      |      |      |      |      |       |
|-------------------|------|------|------|------|------|------|------|-------|
| Size, inches..... | 2    | 2½   | 3    | 3½   | 4    | 4½   | 5    | 6     |
| Price .....       | 2.50 | 3.00 | 4.00 | 5.00 | 7.00 | 7.50 | 8.00 | 10.00 |

SINKER BAR AND AUGER STEM.



Fig. 818.

|                                   |       |
|-----------------------------------|-------|
| Price, 1⅞ inch, 16 feet long..... | 15.00 |
| “ 1⅝ “ 16 “ .....                 | 16.00 |

LOOP OR EYE.

To Which Rope Is Attached.



Fig. 819.

|                             |      |                            |       |
|-----------------------------|------|----------------------------|-------|
| Price, for 1¼ inch Rod..... | 1.50 | Price, for 3 inch Rod..... | 10.00 |
| “ “ 1½ “ .....              | 3.50 | “ “ 3½ “ .....             | 12.50 |
| “ “ 2 “ .....               | 5.00 | “ “ 4 “ .....              | 15.00 |
| “ “ 2½ “ .....              | 7.00 |                            |       |

The large number of machines made for putting down wells would necessitate such an amount of room to properly illustrate that we have decided not to show any of the different styles but will furnish special well machinery catalogues at any time giving full information and prices on all classes of well machinery and tools.



AUGERS.

Ribbon Auger.



Fig. 820.

Twist Auger.



Fig. 821.

Open Pod Auger.



Fig. 822.

Close Auger.



Fig. 823.

Sizes and Prices of Figures 820, 821, 822 and 823.

|                      |       |
|----------------------|-------|
| Price, 2½ inch, each | 6.00  |
| “ 3 “ “              | 7.00  |
| “ 4 “ “              | 10.00 |
| “ 5 “ “              | 15.00 |
| “ 6 “ “              | 25.00 |

WOOD ROD COUPLING.



Fig. 824.

|                            |     |
|----------------------------|-----|
| Price, Plain, per set      | .40 |
| Price, Galvanized, per set | .50 |

PUMP ROD COUPLING.



Fig. 825.

|                              |     |
|------------------------------|-----|
| Price, Plain, per pound      | .25 |
| Price, Galvanized, per pound | .35 |

DRIVE HEAD.



Fig. 826.

---

|                                                        |      |
|--------------------------------------------------------|------|
| Price, Wrought Iron, 6 inches long, 1¼ inch, each..... | 1.50 |
| “ Steel, 6 inches long, 1¼ inch, each.....             | 2.00 |
| “ Wrought Iron, 6 inches long, 1½ inch, each.....      | 2.00 |
| “ Steel, 6 inches long, 1½ inch, each... ..            | 3.25 |

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DRIVE CAPS.



Fig. 827.

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|                                           |      |
|-------------------------------------------|------|
| Price, 1¼ inch, Malleable Iron, each..... | .72  |
| “ 1½ “ “ “ “ .....                        | .90  |
| “ 2 “ “ “ “ .....                         | 1.55 |

---

PIPE REAMER FOR REAMING OUT ENDS OF PIPE.



Fig. 828.

---

|                                   |      |
|-----------------------------------|------|
| Price, for 2 inch pipe, each..... | 3.00 |
| “ “ 2½ “ “ “ .....                | 4.00 |
| “ “ 3 “ “ “ .....                 | 6.00 |
| “ “ 4 “ “ “ .....                 | 8.00 |

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BABCOCK AUTOMATIC PIPE HOLDER.

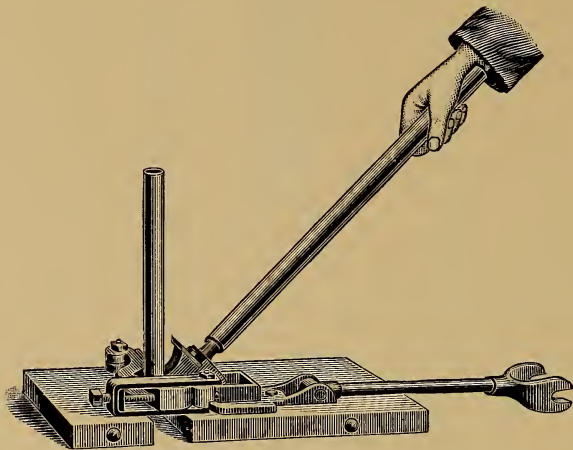


Fig. 829.

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|                        |      |
|------------------------|------|
| Price, each, net ..... | 3.50 |
|------------------------|------|

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BABCOCK AUTOMATIC PIPE LIFTER AND HOLDER.

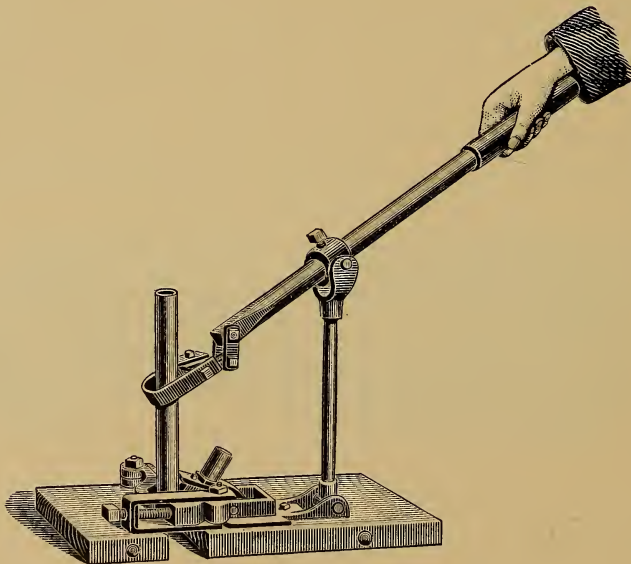


Fig. 830.

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|                        |      |
|------------------------|------|
| Price, each, net ..... | 7.00 |
|------------------------|------|

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## AMERICAN PIPE PULLER.

For Pulling Out Pipe that is Broken Off in Well.



|                   |                                 |                               |       |
|-------------------|---------------------------------|-------------------------------|-------|
| Price, fitted for | $\frac{3}{4}$ inch Pipe to Pull | $1\frac{1}{4}$ inch Pipe..... | 5.00  |
| " " "             | $\frac{3}{4}$ " " "             | $1\frac{1}{2}$ " " .....      | 6.00  |
| " " "             | $\frac{3}{4}$ " " "             | 2 " " .....                   | 7.00  |
| " " "             | $1\frac{1}{4}$ " " "            | 3 " " .....                   | 10.00 |
| " " "             | 2 " " "                         | 4 " " .....                   | 15.00 |
| " " "             | 2 " " "                         | $4\frac{1}{2}$ " " .....      | 16.00 |
| " " "             | $2\frac{1}{2}$ " " "            | 5 " " .....                   | 20.00 |
| " " "             | $2\frac{1}{2}$ " " "            | 6 " " .....                   | 25.00 |

Fig. 831.

## WROUGHT IRON JACK SCREW.



Fig. 832.

| Diam. of<br>Screw.<br>Inches. | Height<br>of Stand.<br>Inches. | Height<br>over all.<br>Inches. | Price. | Diam. of<br>Screw.<br>Inches. | Height<br>of Stand.<br>Inches. | Height<br>over all.<br>Inches. | Price. |
|-------------------------------|--------------------------------|--------------------------------|--------|-------------------------------|--------------------------------|--------------------------------|--------|
| $1\frac{1}{2}$                | 5                              | 8                              | 3.50   | 2                             | 22                             | $26\frac{1}{2}$                | 12.50  |
| $1\frac{1}{2}$                | 6                              | 10                             | 3.75   | 2                             | 24                             | $28\frac{1}{2}$                | 13.50  |
| $1\frac{1}{2}$                | 8                              | 12                             | 4.25   | $2\frac{1}{4}$                | 8                              | 13                             | 7.50   |
| $1\frac{1}{2}$                | 10                             | 14                             | 4.75   | $2\frac{1}{4}$                | 10                             | 15                             | 8.25   |
| $1\frac{1}{2}$                | 12                             | 16                             | 5.25   | $2\frac{1}{4}$                | 12                             | 17                             | 9.00   |
| $1\frac{1}{2}$                | 14                             | 18                             | 6.00   | $2\frac{1}{4}$                | 14                             | 19                             | 10.00  |
| $1\frac{1}{2}$                | 16                             | 20                             | 6.75   | $2\frac{1}{4}$                | 16                             | 21                             | 11.00  |
| $1\frac{3}{4}$                | 6                              | 10                             | 4.50   | $2\frac{1}{4}$                | 18                             | 23                             | 12.00  |
| $1\frac{3}{4}$                | 8                              | 12                             | 5.00   | $2\frac{1}{4}$                | 20                             | 25                             | 13.25  |
| $1\frac{3}{4}$                | 10                             | 14                             | 5.75   | $2\frac{1}{4}$                | 22                             | 27                             | 14.50  |
| $1\frac{3}{4}$                | 12                             | 16                             | 6.25   | $2\frac{1}{4}$                | 24                             | 29                             | 15.75  |
| $1\frac{3}{4}$                | 14                             | 18                             | 6.75   | $2\frac{1}{2}$                | 8                              | 14                             | 8.75   |
| $1\frac{3}{4}$                | 16                             | 20                             | 7.50   | $2\frac{1}{2}$                | 10                             | 16                             | 9.75   |
| $1\frac{3}{4}$                | 18                             | 22                             | 8.50   | $2\frac{1}{2}$                | 12                             | 18                             | 10.75  |
| 2                             | 6                              | $10\frac{1}{2}$                | 5.25   | $2\frac{1}{2}$                | 14                             | 20                             | 12.00  |
| 2                             | 8                              | $12\frac{1}{2}$                | 6.00   | $2\frac{1}{2}$                | 16                             | 22                             | 13.25  |
| 2                             | 10                             | $14\frac{1}{2}$                | 6.75   | $2\frac{1}{2}$                | 18                             | 24                             | 14.50  |
| 2                             | 12                             | $16\frac{1}{2}$                | 7.50   | $2\frac{1}{2}$                | 20                             | 26                             | 15.75  |
| 2                             | 14                             | $18\frac{1}{2}$                | 8.2    | $2\frac{1}{2}$                | 22                             | 28                             | 17.00  |
| 2                             | 16                             | $20\frac{1}{2}$                | 9.2    | $2\frac{1}{2}$                | 24                             | 30                             | 18.25  |
| 2                             | 18                             | $22\frac{1}{2}$                | 10.25  | $2\frac{1}{2}$                | 32                             | 38                             | 26.00  |
| 2                             | 20                             | $24\frac{1}{2}$                | 11.50  | 3                             | 18                             | 24                             | 22.00  |



TOOLS.

PEERLESS PIPE MACHINE.

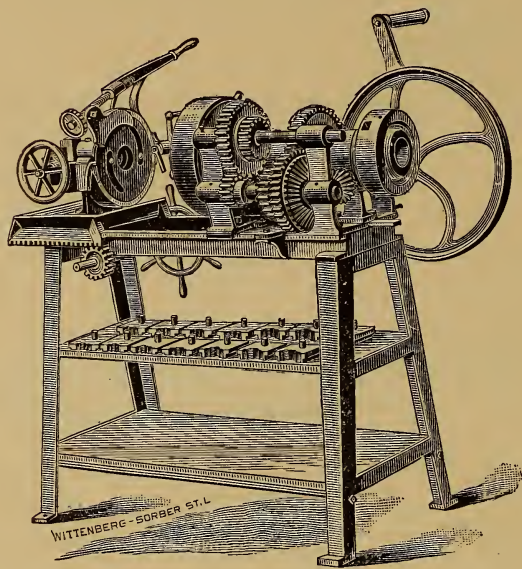


Fig. 833.

Little Peerless Pipe Machine.

| CUTS PIPE 1/4 TO 2 INCH.                           | Solid Dies. | Open Dies. |
|----------------------------------------------------|-------------|------------|
| Price, Hand Machine, complete, each.....           | 90.00       | 175.00     |
| Price, Power and Hand Machine, complete, each..... | 110.00      | 200.00     |

No. 2 Peerless Pipe Machine. Extra Heavy. For Power Only.

|                                                           |        |
|-----------------------------------------------------------|--------|
| Price, complete with Solid Dies, 1/4 to 2 inch, each..... | 300.00 |
| “ “ “ “ 1/2 to 3/4 and Open Dies 1 to 2 inch.....         | 375.00 |

No. 3 Peerless Pipe Machine.

|                                                     |        |
|-----------------------------------------------------|--------|
| Price, complete with Solid Dies, 1/4 to 3 inch..... | 350.00 |
| “ “ “ “ 1/4 to 3/4 and Open Dies 1 to 3 inch.....   | 425.00 |

No. 4 Peerless Pipe Machine.

|                                                           |        |
|-----------------------------------------------------------|--------|
| Price, complete with Expanding Dies from 1 to 4 inch..... | 600.00 |
|-----------------------------------------------------------|--------|

No. 6 Peerless Pipe Machine.

|                                                               |         |
|---------------------------------------------------------------|---------|
| Price, complete with Expanding Dies from 2 1/2 to 6 inch..... | 1000.00 |
|---------------------------------------------------------------|---------|

No. 8 Peerless Pipe Machine.

|                                                               |         |
|---------------------------------------------------------------|---------|
| Price, complete with Expanding Dies from 2 1/2 to 8 inch..... | 1200.00 |
|---------------------------------------------------------------|---------|

## I X L PIPE MACHINE.

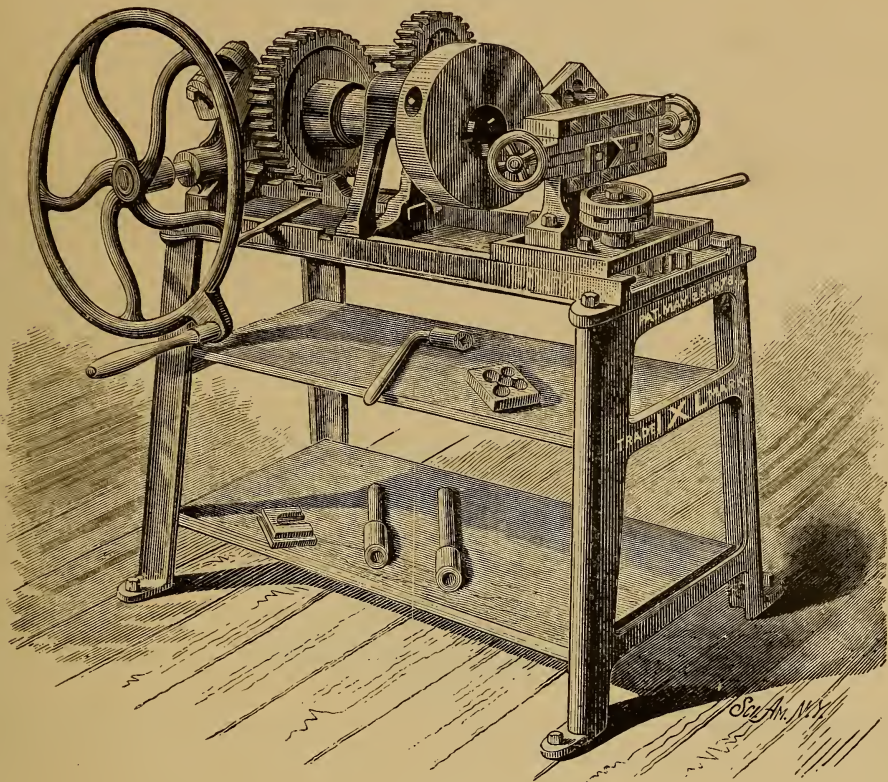


Fig. 834.

These Machines are offered as being Less Expensive, More Substantial, More Thoroughly Fitted, and Better Adapted to General Use than any in the Market.

Being aware of the need of a compact, durable, portable and cheap Machine for Cutting and Threading Pipe one quarter to two inches, we have endeavored to supply the want. We offer this as a substitute for all others that have been sold by the trade, confident that we have a machine which will fill the place claimed for it. When a job of any magnitude is to be done, a large saving of labor is effected by this machine. It will be found that it is much easier on both dies and pipe and also on workmen than the ordinary way of cutting and threading. Three times the amount of work can be done on large sizes than by hand at the same time. Even one-quarter to three-eighths can be threaded and cut off much faster than by hand tools.

## I. X. L. Hand Machine.

Price, with set of right hand Solid Dies  $\frac{1}{4}$  to 2 inch inclusive, Fly Wheel, and set of Sockets for making nipples  $\frac{1}{4}$  to 2 inch, complete..... 90.00

## I. X. L. Power and Hand Machine.

Price, with set of right hand Solid Dies  $\frac{1}{4}$  to 2 inch inclusive, Fly Wheel, Pulleys, Countershaft and set of Sockets for making nipples  $\frac{1}{4}$  to 2 inch, complete..... 110.00

## No. 3 Power Machine.

Price, complete with Solid Dies  $\frac{1}{4}$  to 2 inch, and Cutter Dies  $2\frac{1}{2}$  and 3 inch..... 425.00  
 " " " "  $\frac{1}{4}$  and  $\frac{3}{8}$  inch and Expanding Dies  $\frac{1}{2}$  to 3 inch..... 600.00

## No. 4 Power Machine.

Price, complete with Solid Dies 1 to 2 inch, and Cutter Dies  $2\frac{1}{2}$  to 4 inch... 525.00  
 " " " Expanding Dies 1 to 4 inch..... 725.00

## No. 5 Power Machine.

Price, complete with Solid Dies  $1\frac{1}{4}$  to 2 inch, and Cutter Dies  $2\frac{1}{2}$  to 6 inch..... 875.00  
 " " " Expanding Dies  $1\frac{1}{4}$  to 6 inch..... 1,100.00

## No. 6 Power Machine.

Price, complete with Cutter Dies  $2\frac{1}{2}$  to 8 inch..... 1,100.00  
 " " " Expanding Dies  $2\frac{1}{2}$  to 8 inch..... 1,200.00

PATENT SOLID DIE PLATE.

With Hill's Patent Dies.

Loose Handles, Malleable Body, Japanned and Fitted with Brass Plates.



Fig. 835.

| Number.....                                | 0      | 1      | 1½      | 1¾      | WITH LEADER SCREWS. |         |         |
|--------------------------------------------|--------|--------|---------|---------|---------------------|---------|---------|
|                                            |        |        |         |         | 2                   | 3       | 4       |
| Dies furnished with Stock, inches.....     | ⅛ to ½ | ¼ to 1 | ¾ to 1¼ | 1 to 1½ | 1¼ to 2             | 2½ to 3 | 2½ to 3 |
| Dimensions of Dies, inches .....           | 2 x ½  | 2½ x ¾ | 3 x ¾   | 3 x ¾   | 4 x ⅞               | 5 x 1¼  | 5 x 1¼  |
| Price, Stock, with R. H. Dies complete.... | 9.50   | 15.00  | 13.50   | 13.50   | 20.00               | 50.00   | 55.00   |
| “ “ without Dies, each.....                | 3.50   | 5.00   | 6.00    | 6.00    | 9.50                | 25.00   | 33.00   |
| “ extra R. or L. “ “ .....                 | 1.50   | 2.00   | 2.50    | 2.50    | 3.50                | 9.00    | 9.00    |
| “ “ Bushings, each.....                    | .25    | .35    | .45     | .45     | .60                 | 1.00    | 1.00    |
| “ Die Frames, “ .....                      |        | .30    | .40     | .40     | .50                 | .60     | .60     |

No. 4 Stock has Four Arms.

ARMSTRONG'S IMPROVED ADJUSTABLE STOCK AND DIES.

For Pipe and Bolts.



Fig. 836.

| Number.....                                  | 1      | 2      | 3       |
|----------------------------------------------|--------|--------|---------|
| Cuts Pipe, inches... ..                      | ⅛ to ½ | ¼ to 1 | 1¼ to 2 |
| Price, Stock, with R. H. Dies, complete..... | 9.00   | 12.00  | 20.50   |
| “ “ without Dies, each.....                  | 3.00   | 3.50   | 7.00    |
| “ extra Right or Left Dies, each.....        | 1.25   | 1.50   | 4.00    |
| “ “ Bushings, each.....                      | .25    | .25    | .50     |

IMPROVED RATCHET STOCK.

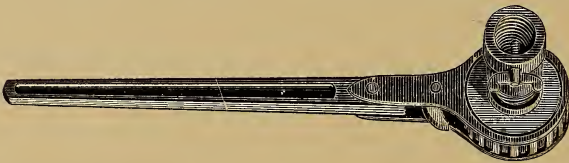


Fig. 837.

| Number.....                    | 1      | 2       |
|--------------------------------|--------|---------|
| Cuts Pipe, inches.....         | ¼ to 1 | 1¼ to 2 |
| Price, without Dies, each..... | 8.50   | 13.50   |

The best tool made for work in ditches or over head. Is cheap, strong and durable. Its use on one piece of work will pay the cost.

PUMP ROD, STOCK AND DIES.



Fig. 838.

|                                                |      |
|------------------------------------------------|------|
| Cuts ⅜ and ⅞ Pump Rod, with Dies complete..... | 5.00 |
|------------------------------------------------|------|



## IMPROVED RATCHET PIPE CUTTER.



Fig. 839.

| Number.....         | 1                      | 2                       |
|---------------------|------------------------|-------------------------|
| Cuts Pipe from..... | $\frac{1}{8}$ to 1 in. | $1\frac{1}{4}$ to 2 in. |
| Price, each .....   | 8.50                   | 11.50                   |

## STANWOOD PIPE CUTTER.

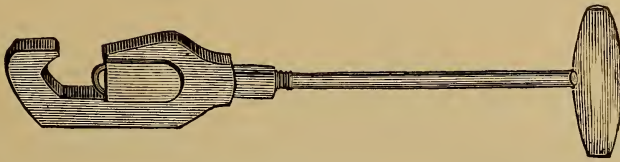


Fig. 840.

| Number.....                                | 1                                  | 2                      | 3          |
|--------------------------------------------|------------------------------------|------------------------|------------|
| Cuts Pipe from.....                        | $\frac{1}{8}$ to $\frac{3}{4}$ in. | $\frac{3}{4}$ to 2 in. | 2 to 3 in. |
| Price, Case Hardened, each.....            | 1.50                               | 2.25                   | 7.00       |
| Price, Steel Faced, each .....             | 1.75                               | 2.50                   | 7.50       |
| Price, Cutter Wheels, each.....            | .12                                | .18                    | .25        |
| Price, Cutter Blocks and Wheels, each..... | .40                                | .60                    | 1.00       |

## SAUNDERS PIPE CUTTER.



Fig. 841.

| Number.....                           | 1                      | 2          | 3          |
|---------------------------------------|------------------------|------------|------------|
| Cuts Pipe from.....                   | $\frac{1}{8}$ to 1 in. | 1 to 2 in. | 2 to 3 in. |
| Price, each.....                      | 3.00                   | 4.50       | 14.00      |
| “ extra Blocks and Wheels, each ..... | 1.50                   | 2.00       | 4.00       |
| “ “ Wheels, each.....                 | .24                    | .32        | .60        |
| “ “ Rollers, each .....               | .24                    | .32        | .50        |

## BARNES PIPE CUTTER.



Fig. 842.

| Number.....               | 1                      | 2                      | 3                       | 4          | 5          |
|---------------------------|------------------------|------------------------|-------------------------|------------|------------|
| Cuts Pipe from.....       | $\frac{1}{8}$ to 1 in. | $\frac{1}{2}$ to 2 in. | $1\frac{1}{2}$ to 3 in. | 3 to 4 in. | 4 to 6 in. |
| Price, each.....          | 4.50                   | 6.00                   | 10.00                   | 20.00      | 30.00      |
| “ extra Wheels, each..... | .25                    | .30                    | .40                     | .50        | 1.00       |
| “ “ Wheel Pins, each..... | .10                    | .10                    | .10                     | .10        | .20        |



ROBBIN'S PATENT CHAIN TONGS.



Fig. 843.

|                      |            |             |            |             |             |             |
|----------------------|------------|-------------|------------|-------------|-------------|-------------|
| Number.....          | 2          | 3           | 4          | 5           | 6           | 7           |
| Length of Lever..... | 27 in.     | 3 ft.       | 4 ft.      | 5 ft.       | 6 ft.       | 7 ft.       |
| Takes Pipe from..    | 1 to 2 in. | 2¼ to 4 in. | 2 to 6 in. | 2½ to 8 in. | 4 to 10 in. | 6 to 12 in. |
| Price, each.....     | 5.50       | 6.25        | 9.00       | 12.50       | 16.00       | 30.00       |

BROWN'S PATENT ADJUSTABLE TONGS.

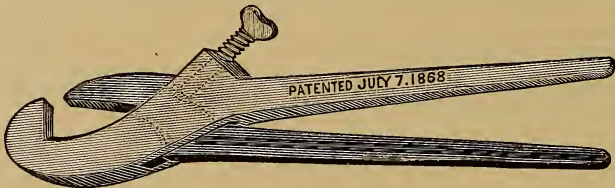


Fig. 844.

|                   |            |            |             |            |             |             |            |            |
|-------------------|------------|------------|-------------|------------|-------------|-------------|------------|------------|
| Number.....       | 1          | 1½         | 2           | 3          | 4           | 5           | 6          | 7          |
| Takes Pipe from.. | ⅛ to ¼ in. | ⅜ to 1 in. | ½ to 1¼ in. | 1 to 2 in. | 1½ to 3 in. | 2½ to 4 in. | 3 to 5 in. | 4 to 7 in. |
| Price, each.....  | 1.00       | 1.25       | 1.50        | 2.10       | 4.00        | 6.75        | 18.00      | 25.00      |

COMMON PIPE TONGS.

Made Extra Heavy and Strong.



Fig. 845.

|                   |     |     |     |    |      |      |      |      |      |      |      |      |      |      |       |
|-------------------|-----|-----|-----|----|------|------|------|------|------|------|------|------|------|------|-------|
| Size, inches..... | ⅛   | ¼   | ⅜   | ½  | ¾    | 1    | 1¼   | 1½   | 2    | 2½   | 3    | 3½   | 4    | 5    | 6     |
| Price, each.....  | .56 | .56 | .72 | 90 | 1.08 | 1.80 | 1.80 | 1.50 | 1.90 | 2.50 | 4.25 | 5.25 | 6.25 | 9.00 | 11.00 |

STILLSON'S PATENT PIPE WRENCH.

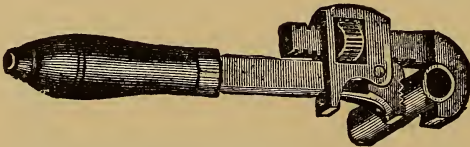


Fig. 846.

|                 |                          |                          |                          |                           |                          |                           |                           |                          |
|-----------------|--------------------------|--------------------------|--------------------------|---------------------------|--------------------------|---------------------------|---------------------------|--------------------------|
| Length, open..  | 6 in.                    | 8 in.                    | 10 in.                   | 14 in.                    | 18 in.                   | 24 in.                    | 36 in.                    | 48 in.                   |
| Takes from. {   | ⅛ in. Wire to ½ in. Pipe | ⅛ in. Wire to ¾ in. Pipe | ⅛ in. Wire to 1 in. Pipe | ¼ in. Wire to 1½ in. Pipe | ¼ in. Wire to 2 in. Pipe | ¼ in. Wire to 2½ in. Pipe | ½ in. Pipe to 1½ in. Pipe | 1 in. Pipe to 5 in. Pipe |
| Price, each.... | 2.00                     | 2.00                     | 2.25                     | 3.00                      | 4.00                     | 6.00                      | 12.00                     | 18.00                    |
| Extra Frame..   | .25                      | .25                      | .33                      | .45                       | .55                      | .65                       | .75                       | 1.00                     |
| Extra Nuts....  | .20                      | .20                      | .27                      | .35                       | .42                      | .50                       | .65                       | .80                      |
| Extra Jaws....  | .67                      | .67                      | .75                      | 1.00                      | 1.33                     | 2.00                      | 4.00                      | 6.00                     |

ROUSE PIPE WRENCH.

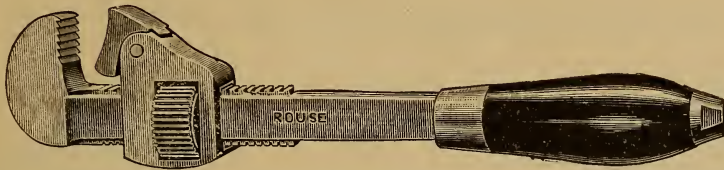


Fig. 847.

|                  |                                |                                |                    |                                 |                                 |                    |                    |                                 |                                 |                    |
|------------------|--------------------------------|--------------------------------|--------------------|---------------------------------|---------------------------------|--------------------|--------------------|---------------------------------|---------------------------------|--------------------|
| Length, inches.. | 6                              | 8                              | 10                 | 13                              | 14                              | 18                 | 24                 | 36                              | 48                              | 60                 |
| Takes Pipe from. | $\frac{1}{8}$ to $\frac{1}{2}$ | $\frac{1}{8}$ to $\frac{3}{4}$ | $\frac{1}{8}$ to 1 | $\frac{1}{4}$ to $1\frac{1}{4}$ | $\frac{1}{4}$ to $1\frac{1}{2}$ | $\frac{1}{4}$ to 2 | $\frac{1}{2}$ to 3 | $\frac{1}{2}$ to $4\frac{1}{2}$ | $\frac{1}{2}$ to $5\frac{1}{2}$ | $\frac{3}{4}$ to 8 |
| Price, each..... | 2.00                           | 2.00                           | 2.25               | 2.75                            | 3.00                            | 4.00               | 6.00               | 12.00                           | 18.00                           | 24.00              |

ROUSE COMBINATION WRENCH.

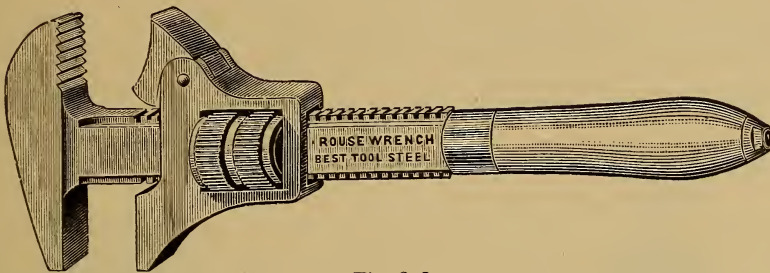


Fig. 848.

|                      |                                |                                |                                 |                    |
|----------------------|--------------------------------|--------------------------------|---------------------------------|--------------------|
| Length, inches.....  | 6                              | 10                             | 12                              | 15                 |
| Takes Pipe from..... | $\frac{1}{8}$ to $\frac{1}{2}$ | $\frac{1}{8}$ to $\frac{3}{4}$ | $\frac{1}{4}$ to $1\frac{1}{4}$ | $\frac{1}{4}$ to 2 |
| Price, per doz.....  | 21.00                          | 25.25                          | 28.50                           | 40.50              |

COE'S PATENT WRENCH.



Fig. 849.

GAS PLIERS.



Fig. 850.

|                                 |      |       |       |       |       |       |       |      |
|---------------------------------|------|-------|-------|-------|-------|-------|-------|------|
| Length, inches .....            | 6    | 8     | 10    | 12    | 15    | 18    | 21    |      |
| Price, Fig. 845, per doz.....   | 9.00 | 10.00 | 12.00 | 14.00 | 24.00 | 30.00 | 36.00 |      |
| Size, inches . . . . .          | 5    | 6     | 7     | 8     | 9     | 10    | 12    | 14   |
| Price, Fig. 846, each . . . . . | .75  | .75   | .85   | 1.05  | 1.20  | 1.50  | 2.00  | 2.40 |

PIPE TAPS AND REAMERS.



Fig. 851.

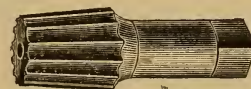


Fig. 852.

|                            |               |               |               |               |               |      |                |                |      |                |       |
|----------------------------|---------------|---------------|---------------|---------------|---------------|------|----------------|----------------|------|----------------|-------|
| Size, inches .....         | $\frac{1}{8}$ | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{3}{4}$ | 1    | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2    | $2\frac{1}{2}$ | 3     |
| Price, Taps, each.....     | 1.12          | 1.25          | 1.50          | 1.87          | 2.50          | 3.12 | 3.75           | 4.62           | 6.25 | 10.50          | 15.00 |
| Price, Reamers, each ..... | 1.12          | 1.25          | 1.50          | 1.87          | 2.50          | 3.12 | 3.75           | 4.62           | 6.25 | 10.50          | 15.00 |

PIPE VISES.

PATENT COMBINATION VISE.

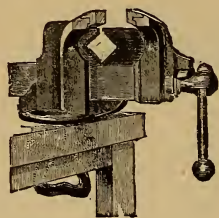


Fig. 849.

BENCH VISE.  
Five-Inch Jaws.

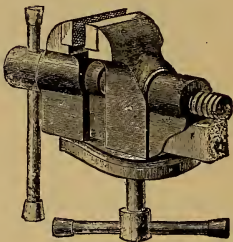


Fig. 850

|                                                                       |       |
|-----------------------------------------------------------------------|-------|
| Price, Fig. 849, No. 1, holds $\frac{1}{8}$ to 2 inch Pipe, each..... | 16.00 |
| “ “ “ 2, “ $\frac{1}{8}$ “ 3 “ “ .....                                | 20.00 |
| Price, Fig. 850, holds $\frac{1}{8}$ to 4 inch Pipe, each.....        | 20.00 |

HINGED PIPE VISE.

Malleable Iron.

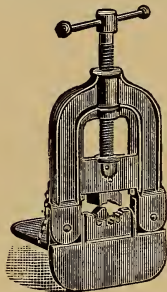


Fig. 851.

PIPE AND BOLT VISE.

Instantaneous, Self-Adjusting and Self-Gripping.

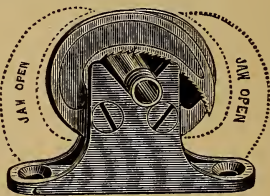


Fig. 852.

|                                                                                    |       |
|------------------------------------------------------------------------------------|-------|
| Price, Fig. 851, No. 1, holds $\frac{1}{8}$ to 2 inch Pipe, each.....              | 10.00 |
| “ “ “ 2, “ $\frac{1}{4}$ “ 3 “ “ .....                                             | 13.00 |
| “ “ “ 3, “ 2 “ 6 “ “ .....                                                         | 30.00 |
| Price, Fig. 852, No. 1, holds $\frac{1}{4}$ to $1\frac{1}{4}$ inch Pipe, each..... | 3.00  |
| “ “ “ 2, “ $\frac{1}{4}$ “ 3 “ “ .....                                             | 6.00  |
| “ “ Clamp for No. 1, extra, each.....                                              | 1.00  |

ANGLE PLATE VISE.



Fig. 853.

|                                                                       |       |
|-----------------------------------------------------------------------|-------|
| Price, Fig. 853, No. 1, holds $\frac{1}{8}$ to 2 inch Pipe, each..... | 12.00 |
| “ “ “ 2, “ $\frac{1}{8}$ “ 3 “ “ .....                                | 18.00 |

# STEAM AND GAS FITTERS AUGER.



Fig. 854.

|                           |               |               |               |                |                |                |                |                |                |
|---------------------------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Size, inches .....        | $\frac{5}{8}$ | $\frac{3}{4}$ | $\frac{7}{8}$ | $1\frac{1}{4}$ | $1\frac{1}{2}$ | $1\frac{3}{4}$ | 2              | $2\frac{1}{2}$ | 3              |
| Size of Pipe, inches..... | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{2}$ | $\frac{3}{4}$  | 1              | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 2              | $2\frac{1}{2}$ |
| Price, each.....          | .80           | 1.00          | 1.12          | 1.60           | 1.92           | 2.25           | 2.50           | 3.25           | 4.00           |

# RATCHET DRILL.

Sleeve or Monitor Pattern.



Fig. 855.

|                             |       |       |       |       |
|-----------------------------|-------|-------|-------|-------|
| Number.....                 | 1     | 2     | 3     | 4     |
| Length of Handle, inches... | 10    | 12    | 16    | 18    |
| Price, each.....            | 10.50 | 13.50 | 16.00 | 19.00 |

# BOILER RATCHET.



Fig 856.

|                               |      |       |
|-------------------------------|------|-------|
| Number.....                   | 1    | 2     |
| Length of Handle, inches..... | 10   | 12    |
| Price, each.....              | 9.00 | 10.50 |

# PROSSER SPRING TUBE EXPANDER.



Fig. 857.

|                                       |       |                |                |                |                |                |                |                |
|---------------------------------------|-------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Outside Diameter of Tube, inches..... | 1     | $1\frac{1}{4}$ | $1\frac{1}{2}$ | $1\frac{3}{4}$ | 2              | $2\frac{1}{4}$ | $2\frac{1}{2}$ | $2\frac{3}{4}$ |
| Price, each.....                      | 8.00  | 8.00           | 9.00           | 11.00          | 12.00          | 13.00          | 15.00          | 18.00          |
| Outside Diameter of Tube, inches..... | 3     | $3\frac{1}{4}$ | $3\frac{1}{2}$ | 4              | $4\frac{1}{2}$ | 5              | 6              | 7              |
| Price, each.....                      | 22.00 | 26.00          | 30.00          | 33.00          | 37.00          | 42.00          | 60.00          | 75.00          |



DUDGEON PATENT ROLLER TUBE EXPANDER.

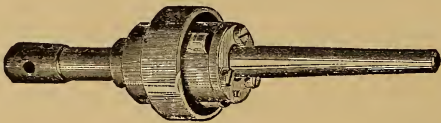


Fig. 858.

|                                       |       |       |       |       |        |        |        |        |
|---------------------------------------|-------|-------|-------|-------|--------|--------|--------|--------|
| Outside Diameter of Tube, inches..... | 1     | 1¼    | 1½    | 1¾    | 2      | 2¼     | 2½     | 2¾     |
| Price, each.....                      | 20.00 | 20 00 | 20.00 | 25.00 | 30.00  | 35.00  | 42.00  | 48.00  |
| Outside Diameter of Tube, inches..... | 3     | 3¼    | 3½    | 4     | 4½     | 5      | 6      | 7      |
| Price, each.....                      | 55.00 | 60 00 | 70.00 | 85.00 | 100.00 | 120.00 | 130.00 | 180.00 |

ENGINEER'S FAVORITE FLUE CLEANER.



Fig. 859.

|                                        |      |      |      |      |      |      |      |
|----------------------------------------|------|------|------|------|------|------|------|
| Outside Diameter of Tube, inches ..... | 1½   | 1¾   | 2    | 2¼   | 2½   | 2¾   | 3    |
| Price, each ... ..                     | 1.50 | 1.75 | 2.00 | 2.25 | 2.50 | 2.75 | 3.00 |
| Outside Diameter of Tube, inches ....  | 3¼   | 3½   | 3¾   | 4    | 4½   | 5    | 6    |
| Price, each.....                       | 3.25 | 3.50 | 3.75 | 4.00 | 4.50 | 5.00 | 6.00 |

EXPANDING WIRE FLUE BRUSH.

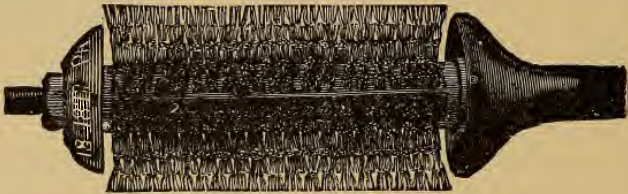


Fig. 860.

|                                |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------------|------|------|------|------|------|------|------|------|------|------|------|
| Outside Diam. of Tube, inches. | 1½   | 1¾   | 2    | 2¼   | 2½   | 2¾   | 3    | 3¼   | 3½   | 3¾   | 4    |
| Price, each ... ..             | 2.00 | 2.00 | 2.00 | 2.25 | 2.50 | 2.75 | 3.00 | 3.25 | 3.50 | 3.75 | 4.00 |

FLAT WIRE FLUE BRUSH.



Fig. 861.

|                                |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------------|------|------|------|------|------|------|------|------|------|------|------|
| Outside Diam. of Tube, inches. | 1½   | 1¾   | 2    | 2¼   | 2½   | 2¾   | 3    | 3¼   | 3½   | 3¾   | 4    |
| Price, each ... ..             | 1.50 | 1 75 | 2 00 | 2.25 | 2.50 | 2.75 | 3.00 | 3 25 | 3.50 | 3.75 | 4.00 |

## BUFFALO FORGES.

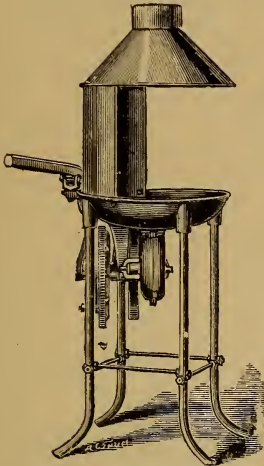


Fig. 866.

Forge No. 4.

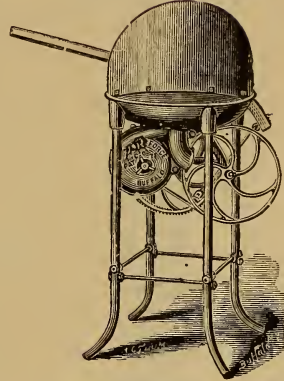


Fig. 867

Forge No. 5.

Among the many points of superiority of the Buffalo Forge over all others, are strength, lightness, durability, workmanlike manner of construction, powerful blast, and ease with which same is operated. A glance at the cut will show the principle of their construction and the manner of operating. It is entirely new. There is no dead center to overcome when starting up, and it is impossible to revolve the fan backwards. In operating it, one is not obliged to get down close to the fire and turn a crank in order to get his blast, but the movement of the lever (which requires but little power) in the Buffalo Forge, to drive the fan, is much like that of ordinary bellows, and being fixed on a swivel joint, has that easy motion which makes the work of operating it play instead of hard work. It also allows the operator to move about his fire on a radius of from three to six feet or more (according to size), without interrupting the blast. The machinery is all attached to the hearth, which makes it very compact. The legs are wrought iron pipe, and are screwed firmly into cast iron sockets projecting from the hearth. The working parts being entirely under the hearth, they are protected from cinders or danger of breakage.

|                                  | Size of Fan.<br>Inches. | Size of<br>Hearth.<br>Inches. | Height of<br>Fireplace.<br>Inches. | Weight<br>Pounds. | Price. |
|----------------------------------|-------------------------|-------------------------------|------------------------------------|-------------------|--------|
| No. 1, Half Open Hood.....       | 8                       | 21×27                         | 29                                 | 150               | 40.00  |
| No. 2, Entirely Closed Hood..... | 8                       | 21×27                         | 29                                 | 155               | 42.00  |
| No. 3, with Dash.....            | 8                       | 21×27                         | 29                                 | 148               | 36.00  |
| No. 4, Half Open Hood.....       | 6                       | 18×18                         | 33                                 | 75                | 27.00  |
| No. 5, with Dash.....            | 6                       | 18×18                         | 33                                 | 70                | 24.00  |
| No. 6, Entirely Closed Hood..... | 6                       | 18×18                         | 33                                 | 80                | 30.00  |
| No. 7.....                       | 6                       | 15×15                         | 15                                 | 40                | 16.00  |
| No. 8.....                       | 6                       | 15×15                         | 15                                 | 50                | 18.00  |

## AIR PUMP.

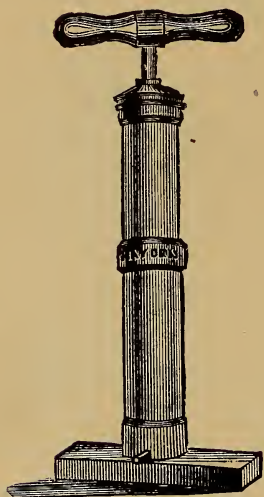


Fig. 868.

## GAS PROVING PUMP.

With Mercury Gauge.

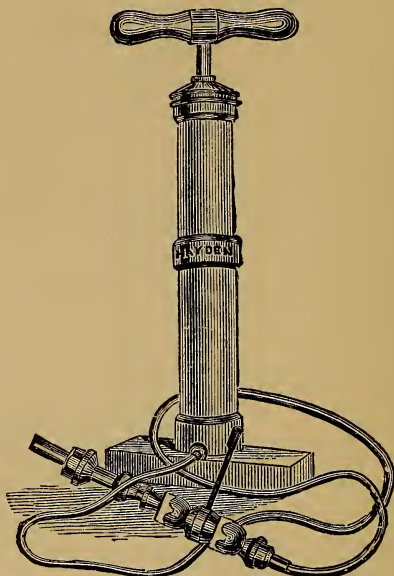


Fig. 869.

|                                |       |
|--------------------------------|-------|
| Price, Fig. 864, each.....     | 15.00 |
| Price, Fig. 865, each.....     | 25.00 |
| “ “ Mercury Gauge, extra ..... | 10.00 |

## GAS PROVING PUMP.

With Air Gauge.

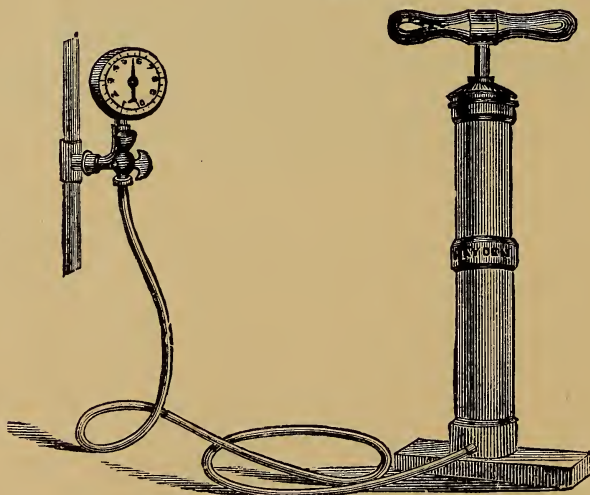


Fig. 870.

|                         |       |
|-------------------------|-------|
| Price, each .....       | 30 00 |
| “ Ether Cup, extra..... | 5.00  |
| “ Gauge only .....      | 12.00 |

## PLUMBERS' BLAST FURNACE.

## THE "JEWEL."

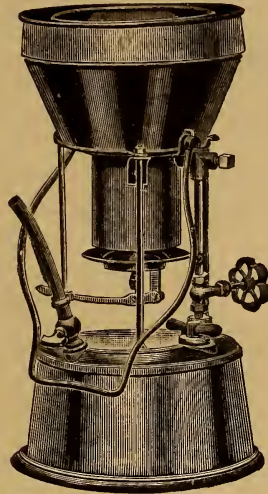


Fig. 871.

---

|                  |       |
|------------------|-------|
| Price, each..... | 10.00 |
|------------------|-------|

---

We can recommend this Furnace as the very best in the market. We have had it in steady, practical use for the last four years, and it has given excellent satisfaction wherever used. It does not burn one-half as much gasoline as other Furnaces, and gives more heat. In many of the plumber's Furnaces now on the market, a large proportion of the gasoline is wasted through not being subjected to sufficient heat before reaching the burner. From tests made by plumbers it has been shown that the Jewel burns but one-third the amount of gasoline used in the other furnaces.

In addition to the ordinary valve, used on all furnaces, the Jewel is provided with a Lever Regulating Valve, and every time the Furnace is entirely closed off, the point of the Lever Regulating Valve cleans out the burner, giving it no chance to clog. In case it should be clogged at any point, it is fitted with small brass plugs, which can be taken out, and the burner cleaned without taking the Furnace apart.

The flame is a very steady, clear blue one, and the heat is very intense.

By taking off the upper portion of furnace, Soldering Irons can be easily heated.

We guarantee every Furnace to give satisfaction.

## DIRECTIONS FOR OPERATING.

Use only 74° Deodorized Gasoline.

See that the Outlet (or Needle) Valve and Air Cock are closed.

Remove Filler Plug, and fill until gasoline appears in the hole.

Open Air Cock to allow gasoline to fall, then return Plug to place and screw it down tightly.

After blowing in through the Air Cock one *full* breath, close it, and the furnace is then charged ready for use.

Open Needle Valve enough to let the gasoline flow and partly fill the Drip Cup; apply a match; and when the gasoline in Cup has nearly burned out, open the Needle Valve and allow the vapor to ignite at top of furnace.



PLUMBERS' TOOLS.

RASP.



Fig. 872.

|                   |     |     |     |
|-------------------|-----|-----|-----|
| Size, inches..... | 10  | 12  | 14  |
| Price, each.....  | .40 | .60 | .80 |

CHISEL.



Fig. 878.

|                  |     |
|------------------|-----|
| Price, each..... | .50 |
|------------------|-----|

FILE.



Fig. 873.

|                              |     |     |     |
|------------------------------|-----|-----|-----|
| Size, inches.....            | 10  | 12  | 14  |
| Price, half round, each..... | .40 | .60 | .80 |
| Price, flat, each.....       | .40 | .60 | .80 |

GOUGE.



Fig. 879.

|                  |     |
|------------------|-----|
| Price, each..... | .50 |
|------------------|-----|

CHIPPING KNIFE.



Fig. 874.

|                   |     |     |
|-------------------|-----|-----|
| Size, inches..... | 4½  | 5   |
| Price, each.....  | .40 | .50 |

COLD CHISEL.



Fig. 880.

|                  |     |
|------------------|-----|
| Price, each..... | .35 |
|------------------|-----|

SHAVE HOOK.



Fig. 875.

|                  |     |
|------------------|-----|
| Price, each..... | .45 |
|------------------|-----|

CALKING CHISEL.



Fig. 881.

|                  |     |
|------------------|-----|
| Price, each..... | .40 |
|------------------|-----|

HATCHET COPPER BOLT.

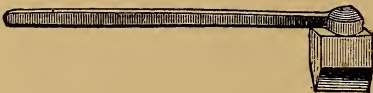


Fig. 876.

|                       |     |
|-----------------------|-----|
| Price, per pound..... | .40 |
|-----------------------|-----|

FLOOR CHISEL.



Fig. 882.

|                  |      |
|------------------|------|
| Price, each..... | 2.50 |
|------------------|------|

POINTED COPPER BOLT.



Fig. 877.

|                       |     |
|-----------------------|-----|
| Price, per pound..... | .40 |
|-----------------------|-----|

ROUND IRON.



Fig. 883.

|                  |     |     |     |
|------------------|-----|-----|-----|
| Number.....      | 1   | 2   | 3   |
| Price, each..... | .60 | .75 | .95 |

## Plumbers' Tools.—CONTINUED.

## BOXWOOD DRESSER.

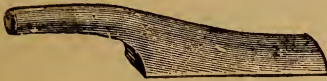


Fig. 884.

Price, each..... 1.00

## SIDE EDGE.



Fig. 885.

Price, each..... .50

## TURN PIN.



Fig. 886.

|                |     |     |     |
|----------------|-----|-----|-----|
| Number...      | 1   | 2   | 3   |
| Price, each .. | .15 | .25 | .40 |

## DRIFT PLUG.



Fig. 887.

Price, 1 or 1¼ inch, each..... .25

## BOSSING STICK.



Fig. 888.

Price, each..... 1.25

## PLUMBER'S SAW.



Fig. 889.

|                                |      |      |
|--------------------------------|------|------|
| Size, inches.....              | 12   | 14   |
| Price, Single Edge, each.....  | .90  | 1.00 |
| Price, Double Edge, each ..... | 1.50 |      |

## COMPASS SAW.



Fig. 890.

Price, each..... .60

## CUTTING PLYERS.



Fig. 891.

Price, each..... 1.25

## HAMMER.



Fig. 892.

Price, each... 1.00

## BENDING PIN.



Fig. 893.

Price, each..... .25

## TAP BORER.



Fig. 894.

Price, each..... .45

## BASIN WRENCH.



Fig. 895.

Price, each..... 1.75

Plumbers' Tools.—CONTINUED.

SCREW DRIVER.



Fig. 896.

Price, each..... .50

LADLE.



Fig. 897.

Size, inches..... 2½ 3 3½ 4 5 6  
Price, each..... .30 .40 .45 .50 .65 .90

BOXWOOD RULE.



Fig. 898.

Price, each .... .30

ANGULAR BORER.



Fig. 899.

Price, each..... 1.75

PATENT RATCHET BRACE.



Fig. 900.

Price, each..... 2.25

TORCH.



Fig. 901.

Price, Tin, each..... 1.00  
Price, Brass, each..... 1.25  
Price, Galloway Patent, each..... 1.50

POT HOOK.



Fig. 902.

Price, each..... .15

SOIL CUP.



Fig. 903.

Price, each..... .40

GREASE BOX.



Fig. 904.

Price, each. .... 1.25

BLOW PIPE.



Fig. 905.

Price, each..... .50

TAPE MEASURE.

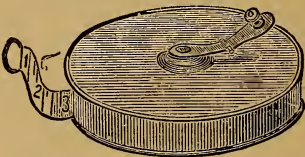


Fig. 906.

Price, each..... 1.50

COMPASS.



Fig. 907.

Price, each..... .45

Plumbers' Tools.—CONTINUED.

PLUMBERS' HOOKS



Fig. 908.

Price, per pound. . . . . .20

COPPER WIRE.



Fig. 909.

Price, per pound. . . . . .50

WASHER CUTTER.

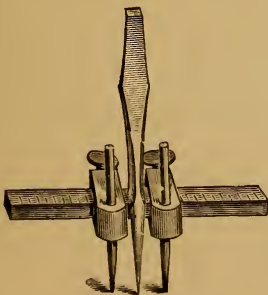


Fig. 910.

Price, each . . . . . 1.25

PLUMBERS' FORCE PUMP.

New Pattern Steam Metal.



Fig. 911.

Price, each . . . . . 12.00

PLUMBERS' FORCE PUMP.

Steam Metal.



Fig. 912.

Price, each . . . . . 10.00

RUBBER FORCE CUP.



Fig. 913.

Price, No. 1, each. . . . . .50

" " 2, " . . . . . .75

" " 3, " . . . . . 1.00



Plumbers' Tools.—CONTINUED.

TOOL BAG.

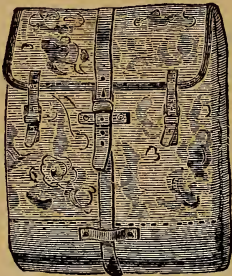


Fig. 914.

|                                             |      |
|---------------------------------------------|------|
| Price, Plain, each .....                    | 4.50 |
| Price, Leather Bottom, each .....           | 6.00 |
| Price, Leather Bottom and Sides, each ..... | 7.00 |

WIPING CLOTH.



Fig. 915.

|                                |      |
|--------------------------------|------|
| Price, Moleskin, per doz. .... | 2.75 |
|--------------------------------|------|

"GRIFFIN'S" IMPROVED HACK SAW.

For Sawing Brass, Iron, Steel, Lead Pipe and Metals of all kinds.



Fig. 916.

|                    |      |      |
|--------------------|------|------|
| Size, inches ..... | 10   | 12   |
| Price, each .....  | 2.00 | 2.50 |

OAKUM.



Fig. 917.

|                              |      |
|------------------------------|------|
| Price, per 50 lb. Bale ..... | 5.00 |
|------------------------------|------|

## BELLS.

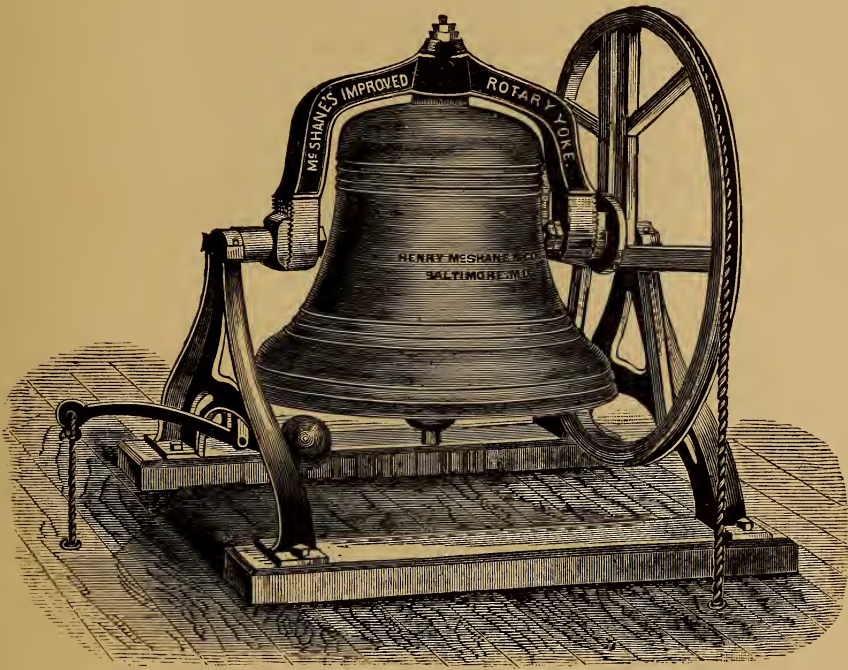


Fig. 918.

We are Sole Agents for the Celebrated McShane Bells and can furnish promptly and at lowest market rates, all kinds of

Church, Fire Alarm, Factory or Plantation Bells.

Our Bells are all made of the Best Bell Metal and Guaranteed for Three Years. Send for Circulars and Prices.

## "AMAZON."



Fig. 919.

Illustrated Catalogue of Iron Vases for Lawns, Cemeteries, Public Parks, etc., furnished on application.



FOUNTAINS, AQUARIUMS.

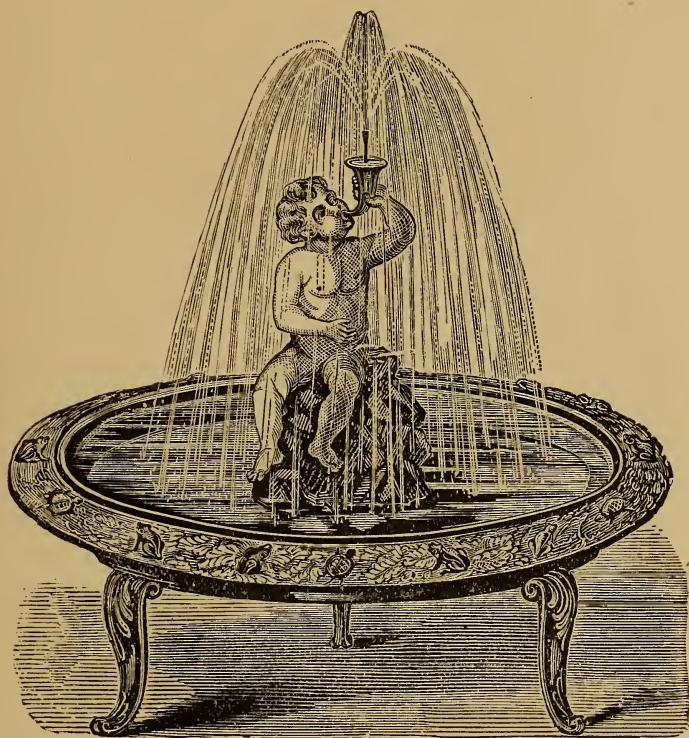


Fig. 920.

And all kinds of Ornamental Iron Work.

Prices and Catalogues furnished on application.







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